

# प्रज्ञा

प्रथमो भागः

नवमकक्षायाः संस्कृतस्य पाठ्यपुस्तकम्

संपादक

डॉ. कृष्णचन्द्र त्रिपाठी



राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्  
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**सर्वाधिकार सुरक्षित**

- ☐ प्रकाशक की पूर्ण अनुमति के बिना इस प्रकाशन के किसी भाग को छापना तथा इलेक्ट्रॉनिकी, मशीनी, फोटोप्रतिनिधि, रिकॉर्डिंग अथवा किसी अन्य विधि से पुनः प्रयोग पद्धति द्वारा उसका सङ्ग्रहण अथवा प्रसारण वर्जित है।
- ☐ इस पुस्तक कि किसी दूसरे शर्तों के साथ की गई है कि प्रकाशक की पूर्ण अनुमति के बिना यह पुस्तक अपने मूल आवरण अथवा जिल्द के अलावा किसी अन्य प्रकार से व्यापार द्वारा एमारी पर, पुनर्विक्रय या किराए पर न ली जाएगी, न बेची जाएगी।
- ☐ इस प्रकाशन का सही मूल्य इस पुच्छ पर मुद्रित है। एचक की मुहर अथवा विपकार्ड आई पपी (स्टिकर) या किसी अन्य विधि द्वारा अंकित कोई भी सङ्कोचित मूल्य गलत है तथा मान्य नहीं होगा।

**एन.सी.ई.आर.टी. के प्रकाशन विभाग के कार्यालय**

एन.सी.ई.आर.टी. कंपस श्री अश्विनी मार्ग नई दिल्ली 110 016	108, 109 पीट रोड, होन्वेकें हेली एक्सटेंशन बंगलाकरी 8 इस्टेज बैंगलूर 560 088	मनजीवन ट्रस्ट भवन ब्रह्मपुर मणजीवन अहमदाबाद 380 014	सी बम्बू सी. कंपस 32, श्री टी. रोड, सुखपुर 24 बरगना 743 178
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**प्रकाशन सहयोग**

संपादन : एम.लाल  
उत्पादन : अरुण चितकारा  
सुनील कुमार

**आवरण**

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एन.सी.ई.आर.टी. वाटर मार्क 70 जी.एस.एम. पेपर पर मुद्रित।

प्रकाशन प्रभाग में सचिव, राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्, श्री अरविंद मार्ग, नई दिल्ली 110 016 द्वारा प्रकाशित तथा सुप्रीम ऑफसेट प्रैस, के-5 मालवीय नगर, नई दिल्ली 110 017 द्वारा मुद्रित।

भारतस्य शिक्षाव्यवस्थार्या संस्कृतस्य महत्त्वमुद्दिश्य विद्यालयेषु संस्कृतशिक्षणार्थम् आदर्शपाठ्यक्रमपाठ्यपुस्तकादि-सामग्रीविकासक्रमे राष्ट्रियशैक्षिकानुसन्धान-प्रशिक्षणपरिषदः सामाजिक-विज्ञान-मानविकी-शिक्षाविभागेन षष्ठवर्गादारभ्य द्वादशकक्षापर्यन्तं राष्ट्रियपाठ्यचर्यानुरूपं संस्कृतस्य आदर्शपाठ्यक्रमं निर्माय पाठ्यपुस्तकानि निर्मायन्ते। अस्मिन्नेव क्रमे नवमवर्गीयच्छात्राणां कृते प्रमुखेभ्यः गद्य-पद्य नाटक - ग्रन्थेभ्यः प्रतिनिधिभूतान् पाठ्यांशान् संकलय्य सम्पाद्य च राष्ट्रियान्दोलनविषयकं पर्यावरण विषयकं निबन्धपाठौ च विरच्य भूमिका-टिप्पणी-प्रश्नाभ्यास-योग्यताविस्तरैश्च सह प्रस्तूयते प्रज्ञा प्रथमो भागः नाम पाठ्यपुस्तकम्। अत्र संस्कृतसाहित्यस्य विविधविधानां गद्य-पद्य-नाटकानां परिचयप्रदानेन सह छात्रेषु संस्कृतभाषाकौशलानां विकासोऽप्यस्माकं लक्ष्यम्। छात्राः संस्कृते निहितं जीवनोपयोगिज्ञानं संस्कृतमाध्यमेन सरलतया च प्राप्नुयुः तेषु नैतिकमूल्यविकासोऽपि भवेत् एतदर्थमपि पुस्तकेऽस्मिन् प्रयत्नो विहितः।

पुस्तकस्यास्य प्रणयने आयोजितासु कार्यगोष्ठीषु आगत्य यैः विशेषज्ञैः अनुभविभिः संस्कृताध्यापकैश्च परामर्शादिकं दत्त्वा सहयोगः कृतः, तान् प्रति परिषदियं स्वकार्तृज्ञं प्रकटयति। पुस्तकमिदं छात्राणां कृते उपयुक्ततरं विधातुं अनुभविनां विदुषां संस्कृत-शिक्षकाणां च सत्परामर्शाः सदैवारमाकं स्वागताहर्हाः।

जगमोहनसिंहराजपूतः

नवदेहली

निदेशकः

जनवरी, 2002

राष्ट्रियशैक्षिकानुसन्धानप्रशिक्षणपरिषद्:

# पाठ्य-पुस्तक-निर्माण-समिति

## पाठ्यसामग्री-निर्माण-समिति

कमलाकान्त मिश्र,  
प्रोफेसर, संस्कृत (संयोजक)

श्रीमती उर्मिल खुंगर  
सिलेक्शन ग्रेड, लेक्चरर, संस्कृत

कृष्णचन्द्र त्रिपाठी  
रीडर, संस्कृत

सामाजिक विज्ञान एवं गानविकी शिक्षा विभाग

## पाण्डुलिपि-समीक्षा-संशोधन कार्यगोष्ठी के सदस्य

1. प्रो. विद्यानिवास मिश्र  
पूर्व कुलपति,  
सम्पूर्णानन्द संस्कृत विश्वविद्यालय, वाराणसी
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पूर्व कुलपति,  
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सेवानिवृत्त विभागाध्यक्ष, संस्कृत विभाग,  
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8. श्रीमती शशिप्रभा गोयल  
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10. श्री रामेश्वरवय्याल शर्मा  
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11. श्रीमती संतोष कोहली  
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13. श्री ओमप्रकाश ठाकुर  
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14. श्री परमानन्द झा  
पी.जी.टी., संस्कृत, राजकीय उच्चतर माध्यमिक  
बाल विद्यालय, आदर्श नगर, दिल्ली
15. डॉ. सुगन्ध पाण्डेय  
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16. श्रीमती लता अरोड़ा  
टी.जी.टी., संस्कृत, केन्द्रीय विद्यालय,  
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17. श्रीमती रेखा झा  
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18. डॉ. दया शंकर तिवारी  
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रा.शै.अ.प्र.प., नई दिल्ली



## भूमिका

संस्कृत विश्व की प्राचीनतम भाषा है। भाषावैज्ञानिकों के मतानुसार यह भारतीय संस्कृति और सभ्यता की आधारशिला है। भारतीय संस्कृति, धर्म, दर्शन, इतिहास, पुराण, भूगोल, राजनीति एवं विज्ञान का मूल स्रोत होने के कारण यह भारतवर्ष का गौरव एवं प्राण है। मानवता के संरक्षण तथा संवर्धन हेतु मानवीय मूल्यों की उदात्त व्याख्या कर वसुधैव कुटुम्बकम् की स्थापना करना मानव समाज को संस्कृत की मौलिक देन है। सम् उपसर्गपूर्वक कृ धातु से निष्पन्न संस्कृत शब्द का प्रयोग आदिकवि वाल्मीकि ने सुन्दरकाण्ड में इस प्रकार किया है —

यदि वाचं प्रदास्यामि द्विजातिरिव संस्कृताम्।

रावणं मन्यमाना मां सीता भीता भविष्यति॥ (सु.का. 5/14)

अवान्तरकाल में भी प्राकृत आदि बोलचाल की भाषाओं से पृथक् करते हुए भी इसे संस्कृत कहा गया। महाकवि दण्डी के काव्यादर्श से इसकी पुष्टि होती है —

संस्कृतं नाम दैवी वागन्वाख्याता महर्षिभिः॥ (काव्यादर्श 1/33)

आगे चलकर संस्कृत दो रूपों में विभक्त हुई - वैदिक संस्कृत और लौकिक संस्कृत। वैदिक साहित्य के अंतर्गत संहिता, ब्राह्मण, आरण्यक तथा उपनिषद् ग्रंथ आते हैं। ऋग्वेद, यजुर्वेद, सामवेद तथा अथर्ववेद (चारों वेद) संहिता कहलाते हैं। संहिताओं में जिन मंत्रों का संकलन है उनकी कर्मकाण्डपरक व्याख्या करने वाले ग्रंथों को 'ब्राह्मण' कहा जाता है।

आरण्यकों की रचना वनों में हुई। इनमें कर्मकाण्ड की प्रतीकात्मक व्याख्या की गई है। इसी प्रकार 'उपनिषद्' वैदिक साहित्य के अंतिम अंश माने जाते हैं। इनका दूसरा नाम वेदान्त है, क्योंकि इनमें वेद अर्थात् ज्ञान का प्रौढ़तम रूप प्राप्त होता है। उपनिषद् 12 माने जाते हैं, किंतु कालांतर में शताधिक उपनिषदों की रचना हुई। वैदिक साहित्य की दुर्बोधता को दूर करने के लिए वेदाङ्गों की रचना हुई। यास्क के मतानुसार वैदिक अर्थों को समझने में कठिनाई का अनुभव करने वाले लोगों ने सुविधा के लिए वेदाङ्गों की रचना की। वेदाङ्ग 6 माने जाते हैं - शिक्षा, कल्प, व्याकरण, निरुक्त, छंद और ज्यौतिष।

**शिक्षा कल्पो व्याकरणं निरुक्तं छन्दसां चयः।**

**ज्योतिषामयनं चैव वेदाङ्गानि षडेव तु॥**

वैदिक साहित्य और लौकिक साहित्य के बीच की कड़ी पुराण हैं। पुराण शब्द का अर्थ है पुराना आख्यान (पुराणमाख्यानम्)। सम्भवतः इनकी प्राचीनता के कारण इनका नाम पुराण पड़ गया। पुराण का लक्षण है -

**सर्गश्च प्रतिसर्गश्च वंशो मन्वन्तराणि च।**

**वंशानुचरितं चैव पुराणं पञ्चलक्षणम्॥**

अर्थात् सर्ग या सृष्टि, प्रतिसर्ग अर्थात् सृष्टि का प्रलय, वंशावली, मन्वन्तर अर्थात् किस मनु का समय कब रहा और उस काल में कौन सी महत्त्वपूर्ण घटना हुई तथा वंशानुचरित अर्थात् प्रसिद्ध राजाओं की वंश परम्परा का वर्णन - यही पुराणों के पाँच वर्ण्य विषय हैं। पुराण हमारे समाज के प्रतिबिम्ब हैं तथा आदर्श इतिहास के रूप में प्रस्तुत हैं। पुराणों की संख्या मुख्य रूप से अट्ठारह है -

**भद्रयं भद्रयं चैव ब्रत्रयं वचतुष्टयम्।**

**अनापल्लिङ्गफूस्कानि पुराणानि प्रचक्षते॥**

अर्थात्-

- मकार से दो पुराण - मत्स्य एवं मार्कण्डेय
- भकार से दो पुराण - भविष्य और भागवत
- ब्रयुक्त तीन पुराण - ब्रह्माण्ड, ब्रह्मवैवर्त एवं ब्रह्म
- वकार से चार पुराण - वामन, वराह, विष्णु एवं वायु
- अनापल्लिङ्गकूस्कानि - अग्नि, नारद, पद्म, लिंग, गरुड, कूर्म तथा स्कन्द

इन पुराणों के अतिरिक्त 18 उपपुराण भी मिलते हैं।

संस्कृत साहित्य के विकास की परंपरा में नए अध्याय का आरंभ आदिकवि वाल्मीकि से होता है जिन्होंने लोकनायक मर्यादापुरुषोत्तम राम के चरित्र को केंद्रबिंदु मानकर 'रामायणम्' की रचना की। यह भारतीय संस्कृति का दर्पण ग्रंथ है। इसी तरह कौरवों एवं पाण्डवों के जन्म से लेकर स्वर्ग गमन तक की कथा का वर्णन करते हुए महर्षि वेदव्यास ने 'महाभारत' नामक महाग्रंथ का प्रणयन किया जिसमें जीवन की प्रत्येक दशा का सजीव एवं स्पष्ट चित्रण है। इसमें वर्णित तत्कालीन भारतीय समाज की जीवन पद्धति आज भी लोगों का दिशानिर्देश करती है। महाभारत के विषय में कहा जाता है कि यन्न भारते तन्न भारते, यदिहास्ति तदन्यत्र यन्नेहास्ति न तत्स्वचित् अर्थात् जो इसमें है वह अन्यत्र भी है किंतु जो इसमें नहीं है वह कहीं भी नहीं है। रामायण और महाभारत को आधार मानते हुए पश्वर्ती विद्वानों ने कालांतर में अनेकों रचनाएँ की हैं।

इसी क्रम में कविकुलगुरु महाकवि कालिदास के अभ्युदय के साथ ही संस्कृत-साहित्य में नए-नए सर्जन की ओर कवियों की अभिरुचि बढ़ी। 19 वीं शताब्दी तक अनेकानेक कवियों एवं महाकवियों की रचनाएँ (महाकाव्य,

खण्डकाव्य, गीतिकाव्य, गद्यकाव्य, नीतिकथा, चम्पूकाव्य, नाटक तथा शास्त्रीय रचनाओं के रूप में) प्रकाश में आई। इस प्रकार कालिदास (कुमारसंभव, रघुवंश, मेघदूत, ऋतुसंहार), अश्वघोष (बुद्धचरित, सौन्दरनन्द), भारवि (किरातार्जुनीय) भट्टि (भट्टिकाव्य या रावणवध), माघ (शिशुपालवध), श्रीहर्ष (नैषधीयचरित), जयदेव (गीतगोविन्द), भर्तृहरि (शृङ्गारशतक, नीतिशतक, वैराग्यशतक), अमरुक (अमरुकशतक) तथा क्षेमेन्द्र (दशावतारचरित) आदि कवियों का नाम महाकाव्य तथा खण्डकाव्य के प्रणेताओं के रूप में प्रसिद्ध है। महाकवि विल्हण (विक्रमाङ्कदेवचरित), सुबन्धु (वासवदत्ता), वाणभट्ट (हर्षचरित, कादम्बरी) तथा पं. अम्बिकादत्त व्यास (शिवराजविजय) आदि विद्वानों का नाम गद्य कवियों के रूप में प्रख्यात है। पं. विष्णुशर्मा (पञ्चतन्त्र), नारायण पण्डित (हितोपदेश) गुणाढ्य (बृहत्कथा), क्षेमेन्द्र (बृहत्कथामञ्जरी) तथा सोमदेव (कथासरित्सागर) आदि विद्वानों का नाम कथाकवियों के रूप में विशेषण जाना जाता है। त्रिविक्रमभट्ट (नलचम्पू, मदालसा चम्पू), भोज (रामायण चम्पू), नीलकण्ठदीक्षित (नीलकण्ठविजय चम्पू), तिरुमलाम्बा (वरदाम्बिकापरिणयचम्पू) तथा जीवगोस्वामी (पारिजातहरण चम्पू) प्रभृति विद्वान् चम्पूकाव्य के प्रसिद्ध प्रणेता माने जाते हैं। महाकवि भास (प्रतिमानाटक, अभिषेकनाटक, बालचरित, दूतवाक्य, दूतघटोत्कच, कर्णभार, उरुभङ्ग सहित 13 नाटक), कालिदास (मालविकाग्निमित्र, विक्रमोर्वशीय तथा अभिज्ञानशाकुन्तल), अश्वघोष (शारिपुत्रप्रकरण), शूद्रक (मृच्छकटिक), विशाखदत्त (मुद्राराक्षस), हर्ष (प्रियदर्शिका, नागानन्द तथा रत्नावली), भवभूति (उत्तररामचरित) तथा भट्टनारायण (वेणीसंहार) प्रभृति कवि प्रमुख नाटककारों के रूप में प्रख्यात हैं। इसी प्रकार अमरसिंह, हलायुध, हेमचन्द्र प्रभृति विद्वान् कोशकारों के रूप में जाने जाते हैं। इसी प्रकार छन्दःशास्त्र के विद्वानों, वैयाकरणों, दार्शनिकों, धर्मशास्त्रज्ञों, राजनीतिशास्त्रज्ञों, नीतिशास्त्रविशारदों, शिल्पशास्त्रज्ञों, रत्नशास्त्रविशारदों, चिकित्सावैज्ञानिकों द्वारा रचित प्रामाणिक ग्रन्थों की लम्बी परम्परा मिलती है। इसके अतिरिक्त काव्यशास्त्रविदों की

शास्त्रीय रचनाओं का प्राचुर्य आचार्य भरतमुनि से लेकर पंडितराज जगन्नाथ तक प्राप्त होता है।

### प्रस्तुत संकलन

राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद् द्वारा प्रकाशित विद्यालयी शिक्षा की रूपरेखा - 2000 के आलोक में माध्यमिक स्तर (कक्षा 9 तथा 10) के लिए वैकल्पिक विषय के रूप में विकसित संस्कृत-पाठ्यक्रम के अनुरूप नवम कक्षा के लिए **प्रज्ञा** प्रथमो भागः नामक पाठ्यपुस्तक का प्रणयन किया गया है। छात्रों के संस्कृत-ज्ञान को पुष्ट करने, उनमें राष्ट्रीय, सांस्कृतिक, सामाजिक तथा आध्यात्मिक चेतना को जागृत कर नैतिक मूल्यों के विकास हेतु इसमें संस्कृत-वाङ्मय की प्रसिद्ध रचनाओं-हितोपदेश, चाणक्यनीति, कथासरित्सागर, नीतिशतक (भर्तृहरि), वेतालपञ्चविंशति, दूतवाक्य, श्रीमद्भगवद्गीता, छान्दोग्योपनिषद् तथा रामायण से पाठ्यांश लिए गए हैं।

प्रस्तुत संकलन में कुल 12 पाठ रखे गए हैं, जिनमें 10 पाठ उपर्युक्त ग्रंथों से तथा दो पाठ निबंध के रूप में समाविष्ट किए गए हैं। पाठ्यांशों को यथासम्भव मूल रूप में ही लिया गया है, किंतु कथासरित्सागर एवं छान्दोग्योपनिषद् से संकलित अंशों को संपादित कर संवाद रूप में लिखा गया है। दो पाठ पर्यावरणरक्षणम् तथा लोकमान्यः तिलकः ललित निबंध के रूप में लिखे गए हैं। संस्कृत वाङ्मय के जिन ग्रंथों से पाठ्यांश लिए गए हैं उनका संक्षिप्त परिचय इस प्रकार है —

**1. हितोपदेश** - हितोपदेश नीति की शिक्षा देने वाले संस्कृत कथा साहित्य के ग्रंथों में अत्यंत महत्त्वपूर्ण है। इसकी रचना नारायण पण्डित द्वारा पञ्चतन्त्र के आधार पर की गई है। इनका समय 14वीं शताब्दी ई. माना जाता है। इसकी 43 कथाओं में 25 कथाएं पञ्चतन्त्र से ली गई हैं। हितोपदेश में चार परिच्छेद हैं - मित्रलाभ, सुहृद्भेद, विग्रह तथा सन्धि। एक कथा से दूसरी

कथा को आरंभ करने की इसकी पद्धति भी पञ्चतन्त्र के ही समान है। इसमें अनेक शिक्षाप्रद श्लोक आए हैं, जिनकी भाषा अत्यंत सरल है। भारतीय संस्कृति के अनुसार जीवन को समुन्नत एवं उदात्त बनाने के लिए अपेक्षित सामग्री से युक्त होने के कारण यह ग्रन्थ बालकों के लिए अत्यंत उपादेय है।

**2. चाणक्यनीति** - इस ग्रंथ के प्रणेता चाणक्य हैं। यह नीतिविषयक ग्रंथ है। इसमें 17 अध्याय तथा 340 श्लोक हैं। इसमें राजनीति शास्त्रोक्त नियमों के अनुसार वर्णित है। चाणक्यनीति ज्ञान का भण्डार है जिसे प्राप्तकर छात्र अपने जीवन को सुखी बना सकते हैं। कौटिलीय अर्थशास्त्र जैसे अपूर्व ग्रंथ की रचना कर चाणक्य ने संस्कृत-साहित्य के इतिहास में अपना नाम अमर कर दिया।

**3. कथासरित्सागर** - यह वृहत्कथा का सबसे बड़ा संस्करण है जिसमें 24,000 श्लोक हैं। लोकजीवन में प्रचलित कथाओं का इनमें सरल एवं मनोहारी चित्रण है। इस ग्रंथ का विभाजन लम्बको और तरंगों में किया गया है। इसमें अंधविश्वास, जादूगरी, शैवमत, बौद्धमत, कर्मवाद, शिवपूजा तथा मातृपूजा का बहुत कुशलता के साथ चित्रण किया गया है। इसके प्रणेता सोमदेव कश्मीर के निवासी थे।

**4. चरकसंहिता** - उपलब्ध आयुर्वेदीय संहिताओं में चरकसंहिता सर्वश्रेष्ठ ग्रंथ है। यह चिकित्साप्रधान ग्रंथ है। इस ग्रंथ में चिकित्सा-विज्ञान के मौलिक तत्वों का उत्तम विवेचन है। इसमें आठ खण्ड तथा तीस अध्याय हैं जिनमें आहार, रोग, रोगविज्ञान, शरीरविज्ञान, भ्रूणविज्ञान, निदान एवं सामान्य चिकित्सा विज्ञान वर्णित है। यह ग्रंथ सूत्ररूप में सांख्य, योग, न्याय, वैशेषिक, वेदान्त तथा मीमांसा (आस्तिक दर्शनों) के साथ चार्वाक आदि नास्तिक दर्शनों तथा परोक्ष रूप से व्याकरण आदि वेदाङ्गों की झाँकी भी प्रस्तुत करता है। इसीलिए इस ग्रंथ को अखिलशास्त्रविद्याकल्पद्रुम कहा जाता है। इसके प्रणेता आचार्य चरक हैं।

**5. नीतिशतक** - संस्कृत साहित्य में भर्तृहरि का महत्त्वपूर्ण स्थान है। अपने अनुभवों के आधार पर इन्होंने नीतिशतक, शृङ्गारशतक तथा वैराग्यशतक नामक ग्रंथों की रचना की। प्रत्येक में सौ-सौ श्लोक हैं। नीति-शतक में विद्या, वीरता, सज्जनता, मानव व्यक्तित्व आदि वृत्तियों की प्रशंसा है। इसमें मूर्खता, लोभ, दुर्जनता आदि दुर्गुणों की निन्दा भी सरल संस्कृत श्लोकों में की गई है। नीतिशतक के श्लोक जनमानस को आज भी जीवन-संबंधी नीति का निदर्शन करते हैं।

**6. वेतालपञ्चविशतिका** - यह अत्यंत ही लोकप्रिय 25 कथाओं का संग्रह है। इसका प्राचीनतम रूप बृहत्कथामञ्जरी तथा कथासरित्सागर में प्राप्त होता है। इसका प्रथम संस्करण शिवदास का है जिसमें कहीं कहीं श्लोक भी मिलते हैं। दूसरा संस्करण जम्भलदत्त द्वारा निर्मित है जो पूर्णरूपेण गद्यात्मक है। इसकी कथाएँ इतनी लोकप्रिय हैं की भारत की सभी भाषाओं में इसका अनुवाद प्राप्त होता है।

**7. दूतवाक्य** - महाकवि भास ने 13 नाटक लिखे हैं। इनमें प्रतिमानाटक तथा अभिषेक वाल्मीकिकृत रामायण पर आधारित है। बालचरित, पाञ्चरात्र, मध्यमव्यायोग, दूतवाक्य, दूतघटोत्कच, कर्णभार तथा उरुभङ्ग व्यासकृत महाभारत पर आधारित है। प्रतिज्ञायौगन्धरायण तथा स्वप्नवासवदत्त उदयन और वासवदत्ता की कथा पर आधारित हैं। अविमारक तथा चारुदत्त कल्पित रूपक है। दूतवाक्य में भगवान् कृष्ण का पाण्डवों के दूत के रूप में दुर्योधन की सभा में जाने का वर्णन है। सुन्दर एवं सरल संवादों से संवलित भास का यह नाटक अत्यन्त ही मनोहारी एवं छात्रों के लिए उपयोगी है।

**8. श्रीमद्भगवद्गीता** - यह ग्रन्थ वास्तव में व्यासकृत महाभारत का ही अंश है। इसमें कौरवों एवं पाण्डवों के मध्य युद्ध आरम्भ होने के समय स्वजनों को देखकर युद्ध से विमुख अर्जुन को भगवान् कृष्ण द्वारा निष्काम भाव से कर्म करने के साथ अन्यान्य उपदेश दिए गए हैं। कृष्ण के उपदेश कठिनाइयों में

पड़े मानव-समाज को अनेक प्रकार से प्रेरित कर उनकी समस्याओं का स्पष्ट समाधान प्रस्तुत करते हैं। इसमें 18 अध्याय हैं।

**9. छान्दोग्योपनिषद्** - यह ग्रन्थ सामवेदीय तलवकार ब्राह्मण के अन्तर्गत है। इसमें तत्त्वज्ञान और तदुपयोगी कर्म तथा उपासनाओं का अत्यन्त विशद एवं युक्तियुक्त वर्णन है। उपासना और ज्ञान को सुगमता से समझाने के लिए स्थान स्थान पर आख्यायिकाओं का आश्रय लिया गया है। इसमें आठ अध्याय हैं। 'तत्त्वमसि' का निरूपण छठे अध्याय में किया गया है। यह उपनिषद् सभी स्तर के छात्रों के लिए समान रूप से उपयोगी है।

**10. रामायण** - संस्कृत साहित्य में रामायण को आदिकाव्य कहा जाता है। इसके प्रणेता वाल्मीकि आदिकवि कहे जाते हैं। स्वयं रामायण से ही इस तथ्य की पुष्टि होती है -

**रामायणं चादिकाव्यं स्वर्गमोक्षप्रदायकम्॥**

रामायण में वर्णित विषय-वस्तु परवर्ती संस्कृत कविता की आधारशिला है। इसके सात काण्डों में वाल्मीकि ने मर्यादापुरुषोत्तम श्रीराम का अत्यन्त ही मनोहारी एवं मार्मिक रूपांकन प्रस्तुत किया है। इसमें वर्णित भरत एवं राम का भ्रातृ-स्नेह, राम की पितृभक्ति, हनुमान एवं लक्ष्मण का सेवाभाव, राम एवं सीता की दाम्पत्य-निष्ठा, विभीषण की शरणागति, सुग्रीव एवं राम की मैत्री, निषाद, शबरी तथा पक्षिराज जटायु की भगवन्निष्ठा आदि प्रसंग मानव-मन की सूक्ष्मता का विवेचन करते हैं।

12 पाठों की यह पुस्तक दो सत्रों की परीक्षा के लिए विकसित की गई है। पुस्तक को छात्रों के लिए रुचिकर बनाए रखने के लिए पुस्तक में श्लोक (पद्य), संवाद, कथा, नाटक तथा निबन्ध पाठों का विविधता के क्रम में समायोजन किया गया है। पाठ के साथ आवश्यक चित्र देकर पाठ्यवस्तु को रोचक बनाने का प्रयास किया गया है।



पाठों के आरंभ में पाठ-संदर्भ दिया गया है, जिससे संकलित अंशों के प्रसंग से परिचित होकर छात्र निर्धारित पाठ्यांश को सरलता से हृदयंगम कर सकें। अर्जित ज्ञान के दृढीकरण एवं परीक्षण के लिए वस्तुनिष्ठ, लघूत्तरीय तथा निबंधात्मक रूपों में अभ्यास प्रश्न दिए गए हैं। संस्कृत में अभिव्यक्ति को विकसित करने के उद्देश्य से प्रत्येक पाठ के साथ मौखिक प्रश्न दिए गए हैं। छात्रों की सुविधा के लिए पाठों में आए नवीन एवं कठिन शब्दों के संस्कृत तथा हिन्दी में अर्थ दिए गए हैं। 'अस्माभिः किम् अधीतम्' शीर्षक के अंतर्गत पाठ के मुख्य बिंदुओं को सार रूप में पाठों के साथ ही स्पष्ट किया गया है। तदनंतर योग्यता-विस्तार के अंतर्गत ग्रंथ तथा कवि के परिचय के साथ ही साथ ज्ञान की अग्रिम दिशा का दिग्दर्शन कराने का प्रयास किया गया है। पुस्तक के अंत में 'शब्दार्थः' शीर्षक के अन्तर्गत समस्त कठिन शब्दों के व्याकरणात्मक टिप्पणीसहित संस्कृत तथा हिन्दी में अर्थ देकर छात्रों को शब्दकोश देखने की दिशा में प्रवृत्त करने की प्रेरणा देने का प्रयास किया गया है।

इस संकलन द्वारा छात्रों को यथासंभव संस्कृत की शिक्षा संस्कृत माध्यम से प्रदान करने का प्रयास किया गया है फिर भी पाठ-परिचय तथा शब्दों के अर्थ हिन्दी में देकर संस्कृत की शिक्षा को सुगम एवं उपयोगी बनाने का व्यावहारिक प्रयास किया गया है।

विगत वर्षों में संस्कृत अध्ययन-अध्यापन की परंपरा पर दृष्टिपात कर ऐसा अनुभव किया गया है कि इस स्तर पर संस्कृत का अध्ययन-अध्यापन, व्याकरण एवं अनुवाद विधि से हो रहा है, जिससे छात्रों को संस्कृत का अपेक्षित ज्ञान नहीं हो पाता है। वे उच्चस्तरीय परीक्षा उत्तीर्ण करने के अनंतर भी संस्कृत बोलने में अक्षम रहते हैं। अतः व्याकरण एवं अनुवाद विधि के स्थान पर प्रत्यक्ष-विधि को उपयोग में लाना उपयोगी होगा; किंतु एकाएक प्रत्यक्ष-विधि या संप्रेषण-विधि से विद्यालय में उपलब्ध-कालांशों एवं अध्ययन

में लगने वाले समय को ध्यान में रखते हुए प्रत्यक्ष-विधि या संप्रेषण-विधि से संस्कृत पढ़ना छात्रों को अरुचिकर होने के साथ ही साथ अधिक श्रमसाध्य भी हो सकता है। अतः प्रत्यक्ष विधि/संप्रेषण-विधि तथा व्याकरण एवं अनुवाद पद्धतियों की समन्वित विधि को अपनाकर संस्कृत पढ़ाने के उद्देश्य से इस संकलन को तैयार किया गया है जिससे छात्रों के संस्कृत अध्ययन को सरल से कठिन के क्रम में रोचक एवं उपयोगी बनाया जा सके।

यद्यपि संकलन को छात्रोपयोगी एवं स्तर के अनुरूप बनाने का प्रयास किया गया है तथापि इसे छात्रों के लिए और अधिक उपयोगी बनाने के लिए अनुभवी संस्कृत-अध्यापकों के बहुमूल्य सुझावों का हम सदैव स्वागत करेंगे।

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## गांधी जी का जन्तर

तुम्हें एक जन्तर देता हूं। जब भी तुम्हें सन्देह हो या तुम्हारा अहम् तुम पर हावी होने लगे, तो यह कसौटी आजमाओ :

जो सबसे गरीब और कमजोर आदमी तुमने देखा हो, उसकी शकल याद करो और अपने दिल से पूछो कि जो कदम उठाने का तुम विचार कर रहे हो, वह उस आदमी के लिए कितना उपयोगी होगा। क्या उससे उसे कुछ लाभ पहुंचेगा? क्या उससे वह अपने ही जीवन और भाग्य पर कुछ काबू रख सकेगा? यानि क्या उससे उन करोड़ों लोगों को स्वराज्य मिल सकेगा जिनके पेट भूखे हैं और आत्मा अतृप्त है?

तब तुम देखोगे कि तुम्हारा सन्देह मिट रहा है और अहम् समाप्त होता जा रहा है।

मि. दास

## वन्दना

त्वमादिदेवः पुरुषः पुराणः

त्वमस्य विश्वस्य परं निधानम्।

वेत्तासि वेद्यं च परं च धाम

त्वया तत् विश्वमनन्तरूप॥1॥

वायुर्यमोऽग्निर्वरुणः शशाङ्कः

प्रजापतिस्त्वं प्रपितामहश्च।

नमो नमस्तेऽस्तु सहस्रकृत्वः

पुनश्च भूयोऽपि नमो नमस्ते॥2॥

त्वमन्तकः स्थावरजङ्गमानां

त्वया जगत् प्राणिति देव ! विश्वम्।

त्वं योगिनां हेतुफले रुणत्सि

त्वं कारणं कारणकारणानाम्॥3॥

यं शैवाः समुपासते शिव इति ब्रह्मेति वेदान्तिनो

बौद्धा बुद्ध इति प्रमाणपटवः कर्तेति नैयायिकाः।

अहन्तित्यथजैनशासनरता कर्मेति मीमांसकाः

सोऽयं नो विदधातु वाञ्छितफलं त्रैलोक्यनाथो हरिः॥4॥

भावार्थ : हे विराट पुरुष ! तुम आदि (सर्वप्रथम) देव हो, पुरातन पुरुष हो। तुम इस संसार के सर्वश्रेष्ठ आश्रय हो। तुम ज्ञाता हो, तुम्ही ज्ञेय (जानने योग्य) हो और परमधाम हो। हे अनन्तरूप ! तुम्हारे द्वारा यह संसार व्याप्त है ॥1॥

तुम वायु, यम, अग्नि, वरुण तथा चंद्र हो। तुम प्रजापति (प्रजाओं के स्वामी) तथा प्रपितामह (ब्रह्मा) हो। तुम्हें हजारों बार प्रणाम और तुम्हें पुनः पुनः प्रणाम। ॥2॥

तुम चर-अचर (जगत्) के संहारक हो। हे देव ! तुम्हारे द्वारा ही संसार प्राण धारण करता है (जीवित रहता है), तुम योगियों के कर्म-फल के नाशक हो। तुम (इस) संसार के कारणों के भी कारण (हेतु) हो ॥3॥

शैव (शिवभक्त) जिनकी उपासना शिव के रूप में करते हैं, वेदांती जिनकी उपासना ब्रह्म के रूप में करते हैं, बुद्ध को मानने वाले जिनकी उपासना बुद्ध के रूप में करते हैं, प्रमाणपट्ट नैयायिक जिनकी उपासना कर्त्ता के रूप में करते हैं, जैनमतावलंबी जिनकी उपासना अर्हत के रूप में करते हैं और मीमांसक जिनकी उपासना कर्म के रूप में करते हैं, वे तीनों लोकों के स्वामी हरि हमें मनोवाञ्छित फल प्रदान करें। ॥4॥



प्रथमः पाठः

## दुर्बुद्धिः विनश्यति

[प्रस्तुत पाठ नारायणपंडित द्वारा रचित 'हितोपदेश' नामक ग्रंथ के संधि-खंड की एक कथा है। इसमें अपने मित्र हंसों के मना करने पर भी अन्य सरोवर को जाने की योजना बनाने वाले कछुए के प्राणांत की कथा का रोचक एवं मार्मिक वर्णन है। इस कथा द्वारा उत्तम मित्रों के हितकारी वचनों को स्वीकार करने और सर्वदा तदनुकूल आचरण करने की प्रेरणा प्राप्त होती है।]

अस्ति मगधदेशे फुल्लोत्पलाभिधानं सरः। तत्र संकटविकटनामानौ हंसौ चिरं निवसतः। कम्बुग्रीवनामा तयोर्मित्रम् एकः कूर्मोऽपि तत्रैव प्रतिवसति। अथ एकदा धीवरैरागत्य तत्रोक्तम् यदत्र “अस्माभिः श्वः मत्स्यकूर्मादयो व्यापादयितव्याः।” तदाकर्ण्य कूर्मो हंसौ आह — “सुहृदौ ! श्रुतोऽयं धीवराणामालापः। अधुना किं मया कर्तव्यम्?” हंसौ अवदताम् — “प्रातः यद् उचितं तत्कर्तव्यम्” इति। कूर्मो ब्रूते — “मैवम्। यतः उक्तम्” —

अनागतविधाता च प्रत्युत्पन्नमतिस्तथा।

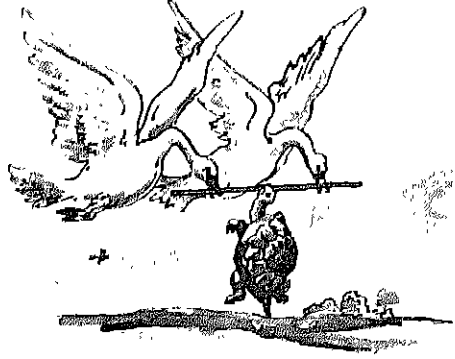
द्वावेतौ सुखमेधेते यद्भविष्यो विनश्यति॥ इति।

तद् यथाऽहमन्यं हृदं प्राप्नोमि तथा क्रियताम्। हंसौ अवदताम् — “जलाशयान्तरं गते तव कुशलम्, किन्तु स्थले गच्छतस्ते को विधिः?” कूर्म आह — “यथाहं भवद्भ्यां सह आकाशमार्गेण यामि तथा क्रियताम्।”

हंसौ ब्रूतः — “कथमुपायः सम्भवति?” कच्छपो वदति — “युवाभ्यां चञ्चुधृतं काष्ठखण्डमेकं मया मुखेन अवलम्बितव्यम्। ततश्च युवयोः पक्षबलेन अहमपि सुखेन गमिष्यामि।” हंसौ ब्रूतः — “सम्भवत्येष उपायः। किन्तु उपायं

चिन्तयन् प्राज्ञो ह्यपायमपि चिन्तयेत्।” आवाभ्यां नीयमानं त्वामवलोक्य लोकैः किञ्चिद् वक्तव्यमेव। यदि त्वमुत्तरं दास्यसि तदा तव मरणं निश्चितम्। तत् सर्वथा अत्रैव स्थीयताम् इति। कूर्मः सकोपं वदति — किमहं मूर्खः? कस्मैचित् अपि उत्तरं न दास्यामि। न किमपि मया तदानीं वक्तव्यम् इति।

एवमनुष्ठिते तथाविधं कूर्मं दृष्ट्वा सर्वे गोपलकाः पश्चाद् धावन्ति वदन्ति च — “अहो महदाश्चर्यम् ! पक्षिभ्यां कूर्मो नीयते।” कश्चिद् वदति — यद्ययं कूर्मो निपतति तदा अत्रैव पक्त्वा खादितव्यः। अन्यो वक्ति — “सरस्तीरे दग्ध्वा खादितव्यः”। अपरः कथयति — “गृहं नीत्वा भक्षणीयः” इति।



तेषां तद् वचनं श्रुत्वा कोपेन आविष्टो विस्मृतपूर्ववचनः कूर्मः प्राह — “युष्माभिः भस्म खादितव्यम्।” इति वदन् एव सः पतितः, तैर्व्यापादितश्च। अत एवोक्तम् —

सुहृदां हितकामानां वाक्यं यो नाभिनन्दति।

स कूर्म इव दुर्बुद्धिः काष्ठाद् भ्रष्टो विनश्यति॥ इति॥

शब्दार्थाः

ग्राह्याः	— स्वीकरणीयाः	— ग्रहण करने योग्य, स्वीकार करने योग्य
धीवरैः	— मत्स्यजीविभिः	— मछली पकड़ने वालों के द्वारा
व्यापादयितव्याः	— मारयितव्याः	— वध करना चाहिए, मारना चाहिए
आकर्ण्य	— श्रुत्वा	— सुनकर
आलापः	— संवादः	— बातचीत
एधेते	— वर्धते	— (दो) बढ़ते हैं



हृदम्	— जलाशयम्	— तालाब को
गच्छतः	— चलतः	— जाते-जाते, चलते-चलते
उपायः	— साधनम्	— साधन, उपाय
पक्षबलेन	— पक्षशक्त्या	— पंखों की शक्ति के द्वारा
अपायम्	— विनाशकं तत्त्वम्	— विनाशक तत्त्व को, विनाश के उपाय को
नीयमानम्	— उह्यमानम्	— लिये जाते हुए
स्थीयताम्	— अवस्थानं क्रियताम्	— रुक जाइए, बैठिए
अनुष्ठिते	— सम्पादिते, कृते	— किए जाने पर
तथाविधम्	— तादृशम्	— वैसे
गोपालकाः	— गोचारकाः	— ग्वाले
नीयते	— उह्यते	— ले जाया जा रहा है
पक्त्वा	— पाकं कृत्वा	— पकाकर
दग्ध्वा	— भर्जनं कृत्वा	— जलाकर, भूनकर
सुहृदाम्	— मित्राणाम्	— मित्रों के

### अस्माभिः किम् अधीतम् ?

- मगधदेशे फुल्लोत्पलं नाम सर आसीत्।
- तत्र संकटविकटनामानौ हंसौ तयोः एकं मित्रं कूर्मश्च वसन्ति स्म।
- एकदा धीवरैः कथितम् — “श्वः आगत्य मत्स्यकूर्मादयो व्यापादयितव्याः।”
- कूर्मः प्रतिकारोपायं चिन्तयित्वा अकथयत् यत् काष्ठखण्डम् एकम् हंसौ चञ्च्वा धारयताम्, कूर्मश्च मुखेन। एवं हंसयोः पक्षबलेन कूर्मोऽपि सुखेन गमिष्यति।
- योजनानुसारं हंसयोः पक्षबलेन गच्छन्तं कूर्मं दृष्ट्वा लोकाः विविधं वदन्ति स्म — “यदि अयं कूर्मः पतति तदा पक्त्वा, दग्ध्वा, नीत्वा वा खादयिष्यामः” इति।
- एतत् श्रुत्वा क्रोधेन कूर्मोऽवदत् — “युष्माभिः भस्म खादितव्यम्” एवं वदन् एव कूर्मः पतितः, लोकैश्च व्यापादितः।

## अभ्यासः

## मौखिकः

## 1. अधोलिखितानां प्रश्नानां एकेनैव पदेन उत्तराणि वदत

- क. कूर्मस्य नाम किम् आसीत्?  
 ख. कौ सुखमेधेते?  
 ग. कूर्मः आकाशमार्गेण काभ्यां सह अगच्छत्?  
 घ. उपायं चिन्तयन् प्राज्ञः अन्यत् किं चिन्तयेत्?  
 ङ. गोपालकानां वचः श्रुत्वा केन आविष्टः कूर्मः वक्तुमारभत?

## लिखितः

## 1. प्रश्नानाम् उत्तराणि संस्कृतभाषया लिखत

- क. मगधदेशे किं नाम सर आसीत्?  
 ख. धीवरैरागत्य किम् उवत्तम्?  
 ग. कच्छपः मुखेन कस्य अवलम्बनम् अकरोत्?  
 घ. गोपालकानां वचः श्रुत्वा कोपाविष्टः कूर्मः किं प्राह?

## 2. सन्धिं / सन्धिविच्छेदं कुरुत

क. यथा -	हित	+	उपदेशः	=	हितोपदेशः
	फुल्ल	+	उत्पलम्	=	
		+		=	तत्रोक्तम्
	एव	+		=	एवोक्तम्
ख. यथा -	तत्र	+	एव	=	तत्रैव
	अत्र	+	एव	=	
	मा	+		=	मैवम्
ग. यथा -	तयोः	+	मित्रम्	=	तयोर्मित्रम्
	धीवरैः	+	आगत्य	=	
	तैः	+	व्यापादितः	=	
घ. यथा -	कूर्मः	+	ब्रूते	=	कूर्मो ब्रूते
	यदभविष्यः	+	विनश्यति	=	

— + —	= को विधिः
— + —	= कूर्मो नीयते

### 3. यथानिर्देशं परिवर्तनं कुरुत

- क. यथा — कूर्मः तत्र प्रतिवसति (द्विवचने)  
 कूर्मो तत्र प्रतिवसतः।  
 मत्स्याः व्यापादयितव्याः (एकवचने)  
 अहं सुखेन गमिष्यामि। (बहुवचने)
- ख. यथा — अहं सुखेन गमिष्यामि (लट् लकारे)  
 अहं सुखेन गच्छामि।  
 कथमुपायः सम्भवति। (लृट् लकारे)  
 उपायं चिन्तयन् प्राज्ञः अपायमपि चिन्तयेत्। (लट् लकारे)
- ग. यथा — अहमन्यं हृदं प्राप्नोमि। (प्रथमपुरुषे)  
 सोऽन्यं हृदं प्राप्नोति।  
 अहम् आकाशमार्गेण यामि। (प्रथमपुरुषे)  
 अहं सुखेन गमिष्यामि। (मध्यमपुरुषे)

### 4. घटनाक्रमम् अनुसृत्य कथां लिखत

- क. हंसौ ब्रूतः — “कथमुपायः सम्भवति” इति।  
 ख. कूर्मो ब्रूते — “यथाऽहमन्यं हृदं प्राप्नोमि तथा क्रियताम्” इति।  
 ग. काष्ठखण्डं चञ्च्वा अवलम्ब्य युवयोः पक्षबलेन अहमपि यास्यामि।  
 घ. धीवरैः उक्तम् — “अस्माभिः श्वः मत्स्यकूर्मादयो व्यापादयितव्याः” इति।  
 ङ. “आवाभ्यां नीयमानं त्वामवलोक्य लोकैः किञ्चिद् वक्तव्यमेव।” कूर्मो वदति —  
 “उत्तरं नैव दास्यामि” इति।  
 च. गोपालकानां वचः श्रुत्वा कूर्मः कोपाविष्टः प्राह — “युष्माभिः भस्म खादितव्यम्।”  
 एवं वदन् एव सः पतितः।  
 छ. सुहृदां हितवाक्यं यो नाभिनन्दति सः विनश्यति।

ज. तथाविधं कूर्मं दृष्ट्वा गोपालका धावन्ति वदन्ति च – “अहो महदाश्चर्यम् यद्येषः पतति, तदा पक्त्वा, दग्ध्वा वा खादितव्यः” इति।

5. अधोलिखितानि वचनानि कस्य कृते कः कथयति

यथा – सुहृदौ ! श्रुतोऽयं धीवराणामालापः।

कः कस्यकृते

अधुना किं मया कर्तव्यम्?

कूर्मः हंसयोः कृते

क. प्रातः यद् उचितं तत्कर्तव्यम्?

ख. किन्तु स्थले गच्छतस्ते को विधिः?

ग. युवयोः पक्षबलेन अहमपि सुखेन गमिष्यामि।

घ. किमहं मूर्खः? उत्तरं न दास्यामि।

ङ. अहो महदाश्चर्यम् ! पक्षिभ्यां कूर्मो नीयते।

च. युष्माभिः भस्म खादितव्यम्।

6. क. अधोलिखितपदानां यथोचितम् अर्थमेलनं कुरुत

सरः इदानीम्

व्यापादयितव्याः वर्धते

आकर्ष्य गच्छामि

अधुना सङ्क्रोधम्

एधेते हृदम्

यामि कुमतिः

सकोपम् मित्राणाम्

सुहृदाम् मारयितव्याः

दुर्बुद्धिः श्रुत्वा

ख. अधोदत्तमञ्जूषातः समुचितपदानि आदाय पदानां समक्षं विलोमपदं लिखत

प्रश्नः आनीयते, उत्पत्ति, अपायः, तत्र, दुःखम्, तदानीम्, सुबुद्धिः, जन्म, मूर्खः

- उपायः
- सुखम्
- अधुना
- प्राज्ञः
- उत्तरम्
- मरणम्
- अत्र
- नीयते
- दुर्बुद्धिः
- निपतति

7. क. भवद्भ्यां सह आकाशमार्गेण यामि।

ख. कस्मैचिद् अपि न दास्यामि।

उपरिलिखितयोः वाक्ययोः क. सह शब्द योगे तृतीया विभक्तिः

ख. दा धातु योगे च चतुर्थी विभक्तिः प्रयुक्ता।

अत्र क भागे प्रयुक्ता उपपदविभक्तिः ख भागे च कारकविभक्तिः।

विशिष्टपदानां योगे या विभक्तिः प्रयुज्यते, सा उपपदविभक्तिः कथ्यते।

यथा —

- सह, साकम्, सार्धम्, समम्, पदानांयोगे तृतीया भवति।
- दा धातु प्रयोगे यस्मै किञ्चित् दीयते तत् सम्प्रदानम् तत्र चतुर्थी प्रयुज्यते।  
उदाहरणानि अनुसृत्य कोष्ठके प्रदत्तपदं प्रयुज्य वाक्यानि रचयत।
- i. मित्राणि मित्रैः सह क्रीडन्ति।
- ii. \_\_\_\_\_ (सह)
- iii. \_\_\_\_\_ (सार्धम्)
- iv. रक्षाबन्धनपर्वणि भ्राता भगिन्यै उपहारं ददाति।
- v. \_\_\_\_\_ (ददाति)
- vi. \_\_\_\_\_ (ददामि)

8. कश्चिद् वदति ..... भक्षणीयः इति। सम्यक् पठित्वा प्रश्नद्वयं रचयत

### योग्यताविस्तारः

#### क. कविपरिचयः

हितोपदेशस्य रचयिता नारायणपण्डितोऽस्ति। तस्य आश्रयदाता बंगप्रदेशीयः राजा धवलचन्द्र आसीत्। हितोपदेशस्य आधारग्रन्थः पञ्चतन्त्रं विद्यते। अस्य 43 कथासु 24 कथाः पञ्चतन्त्रात् सङ्गलिताः। एतत् तु अस्य प्रस्तावनायां स्वीकृतम् “पञ्चतन्त्रात्तथाऽन्यस्माद् ग्रन्थादाकृष्य लिख्यते।”

#### ख. ग्रन्थपरिचयः

हितोपदेशो नीतिशिक्षायाः प्रमुखो ग्रन्थः। अस्य ग्रन्थस्य मूलाधारः पञ्चतन्त्रम् अस्ति। अयं ग्रन्थः मित्रलाभः, सुहृद्भेदः, विग्रहः सन्धिश्चेति चतुर्षु भागेषु विभक्तः। पशु-पक्षि-कथामाध्यमेन बालेभ्यो नीतिशिक्षाः प्रदत्ता वर्तन्ते। तासाम् अद्यापि महत्त्वं विद्यत एव।

#### ग. भाषिकविस्तारः

##### पर्यायवाचिनः

रारोवरः	—	जलाशयः, सरः, ह्रदः।
श्रुत्वा	—	आकर्ण्य, निशम्य, कर्णगोचरीकृत्य।
मित्रम्	—	सुहृद्, सखा, वयस्यः।
प्राज्ञः	—	बुद्धिमान्, ज्ञानवान्, मनीषी।

#### तव्यत् = प्रत्ययस्य प्रयोगः

- तव्यत् — प्रत्ययस्य प्रयोगे कर्तृपदं तृतीयायां विभक्तौ कर्मपदं च प्रथमायां भवति।  
 तव्यत् — प्रत्ययस्य प्रयोगे वाक्यं कर्मवाच्यगतं भाववाच्यगतं वा भवति न तु कर्तृवाच्यगतम्।  
 यदि कर्मपदं वर्तते तर्हि विशेषणरूपा क्रिया कर्मपदानुसारं चलति। यदि वाक्ये कर्मपदं नास्ति तर्हि क्रियावाचकं कृदन्तं प्रथमाविभक्तौ नपुंसकलिङ्गे एकवचने भविष्यति।

तव्यत् — प्रत्ययान्तपदानि त्रिषु लिङ्गेषु प्रयुज्यन्ते।

यथा —	i. अस्माभिः श्वः	मत्स्यकूर्मादयो	व्यापादयितव्याः।
	ii. अधुना मया	किं	कर्तव्यम्।
	iii. मया मुखेन	एककाष्ठखण्डम्	अवलम्बितव्यम्।
	iv. युष्माभिः	भस्म	खादितव्यम्।
	कर्तृपदानि	कर्मपदानि	क्रियापदानि

यत्र कर्म न विद्यते तत्र तव्यत् प्रयोगः

i. मया तदानीं वदितव्यम्।

ii. त्वाम् अवलोक्य लोकैः अवश्यं वक्तव्यम्।

कर्तृपदम् क्रियापदम्

कतिपयानि तव्यत् — प्रत्ययान्तरूपाणि त्रिषु लिङ्गेषु दीयन्ते

	पुंलिङ्गे	स्त्रीलिङ्गे	नपुंसकलिङ्गे
√पठ्	पठितव्यः	पठितव्या	पठितव्यम्
√भू	भवितव्यः	भवितव्या	भवितव्यम्
√श्रु	श्रोतव्यः	श्रोतव्या	श्रोतव्यम्
√कथ्	कथयितव्यः	कथयितव्या	कथयितव्यम्
√चिन्त्	चिन्तयितव्यः	चिन्तयितव्या	चिन्तयितव्यम्
√खाद्	खादितव्यः	खादितव्या	खादितव्यम्
√कृ	कर्तव्यः	कर्तव्या	कर्तव्यम्
√क्री	क्रेतव्यः	क्रेतव्या	क्रेतव्यम्
√गम्	गन्तव्यः	गन्तव्या	गन्तव्यम्
√हस्	हसितव्यः	हसितव्या	हसितव्यम्
√लिख्	लेखितव्यः	लेखितव्या	लेखितव्यम्
√वद्	वदितव्यः	वदितव्या	वदितव्यम्
√नम्	नन्तव्यः	नन्तव्या	नन्तव्यम्

द्वितीयः पाठः

## नीतिमौक्तिकानि

[संस्कृत साहित्य में नीति-ग्रंथों की समृद्ध परंपरा है, जिनमें सरस एवं मनोरंजक ढंग से नैतिक शिक्षाएँ प्रदान की गई हैं। इनका सार सुभाषितों या नीति - श्लोकों में मिलता है। मनोहर एवं बहुमूल्य सुभाषित/नीति स्त्यों से मानव अपने जीवन को समृद्ध एवं सफल बना सकता है। चाणक्यनीति से संकलित इन 9 पद्यों में क्रमशः वाससंबंधी नीति, प्रियवादी किंतु कपटी मित्र का त्याग, आचार की महत्ता विद्या की महिमा, आत्म-सम्मान तथा वास्तविक बांधव आदि विषयों का प्रतिपादन किया गया है।]

यस्मिन्देशे न सम्मानो न वृत्तिर्न च बान्धवाः।  
न च विद्यागमोऽप्यस्ति न तत्र दिवसं वसेत्॥ 1॥  
परोक्षे कार्यहन्तारं प्रत्यक्षे प्रियवादिनम्।  
वर्जयेत्तादृशं मित्रं विषकुम्भं पयोमुखम्॥ 2॥  
आचारः कुलमाख्याति, देशमाख्याति भाषणम्।  
सम्भ्रमः स्नेहमाख्याति वपुराख्याति भोजनम्॥ 3॥  
रूपयौवनसम्पन्ना विशालकुलसम्भवाः।  
विद्याहीना न शोभन्ते निर्गन्धा इव किंशुकाः॥ 4॥  
कोऽतिभारः समर्थानां, किं दूरं व्यवसायिनाम्।  
को विदेशः सविद्यानां, कः परः प्रियवादिनाम्॥ 5॥  
विद्या मित्रं प्रवासेषु, भार्या मित्रं गृहेषु च।  
व्याधितस्यौषधं मित्रं, धर्मो मित्रं मृतस्य च॥ 6॥



अधमा धनमिच्छन्ति धनमानौ च मध्यमाः।  
 उत्तमा मानमिच्छन्ति, मानो हि महतां धनम्॥ 7॥  
 सत्यं माता पिता ज्ञानं धर्मो भ्राता दया सखा।  
 शान्तिः पत्नी क्षमा पुत्रः षडेते मम बान्धवाः॥ 8॥  
 जलबिन्दुनिपातेन क्रमशः पूर्यते घटः।  
 स हेतुः सर्वविद्यानां धर्मस्य च धनस्य च॥ 9॥

### शब्दार्थाः

मौक्तिकानि	— मुक्ताः	— मोती
वृत्तिः	— जीविका	— आजीविका, नौकरी
पयोमुखम्	— दुग्धयुक्तम् मुखम्	— जिसके मुख में दूध लगा है
आख्याति	— कथयति	— कहता है
सम्भ्रमः	— आदरः	— आदर
निर्गन्धाः	— गन्धरहिताः	— गन्ध से हीन
परोक्षे	— अक्ष्णोः परम्	— अनदेखे, श्रूतकाल में
व्यवसायिनाम्	— उद्योगिनाम्	— उद्योग करने वालों का
सविद्यानाम्	— विद्यायुक्तानाम्	— विद्वानों का
प्रवासेषु	— परदेशेषु	— विदेशों में
महताम्	— महापुरुषाणाम्	— महापुरुषों का
जलबिन्दुनिपातेन	— जलबिन्दूनां पतनेन	— पानी की बूँदों के गिरने से

### अस्माभिः किमधीतम्?

- यत्र मनुष्यस्य सम्मानः जीविकाप्रबन्धः, बान्धवाः, ज्ञानप्राप्तिश्च न सन्ति तत्र निवासः न करणीयः।
- यः प्रत्यक्षे प्रियं वदति परोक्षे च कार्यहन्ता, पयोमुखं विषकुम्भम् इव तस्य परित्यागः कर्तव्यः।

- विद्याविहीनाः जनाः निर्गन्धकिंशुकवत् न शोभन्ते।
- नीचजनाः केवलं धनम् एव इच्छन्ति किन्तु उत्तमाः जनाः सम्मानम् एव श्रेष्ठं धनं मन्यन्ते।
- सत्यं, ज्ञानं, धर्मः, दया, शान्तिः क्षमा च षडेते (मनुष्यस्य) माता, पिता, भ्राता, सखा, पत्नी, पुत्र इव बान्धवाः भवन्ति।
- यथा घटः जलबिन्दुनिपातेन क्रमशः पूर्यते तथैव विद्यार्जनं धनार्जनं च क्षणशः क्षणशश्च पूर्यते।



## अभ्यासः

## मौखिकः

## 1. अधोलिखितानां प्रश्नानाम् उत्तराणि एकनैव पदेन वदत

- क. आचारः किम् आख्याति?  
 ख. वपुः किम् आख्याति?  
 ग. प्रवासेषु किं मित्रम्?  
 घ. व्याधितस्य किं मित्रम्?  
 ङ. अधमाः किम् इच्छन्ति?  
 च. महतां धनं किम् अस्ति?  
 छ. जलबिन्दुनिपातेन क्रमशः कः पूर्यते?  
 ज. कोऽस्माकं भ्राता?

## लिखितः

## 1. अधोलिखितानां प्रश्नानाम् उत्तरं पूर्णवाक्येन संस्कृतभाषया लिखत

- क. मनुष्यः कस्मिन् देशे दिवसं न वसेत्?  
 ख. मनुष्यः कीदृशं मित्रं वर्जयेत्?  
 ग. कीदृशाः जनाः निर्गन्धाः किंशुकाः इव न शोभन्ते?  
 घ. केऽस्माकं षड् बान्धवाः सन्ति?  
 ङ. घटः क्रमशः केन पूर्यते?

## 2. सन्धि/सन्धिच्छेदं च कुरुत

क. यथा — मित्रम्	+	विषकुम्भम्	=	मित्रं विषकुम्भम्
i. दिवसम्	+	वसेत्	=	
ii. _____	+	_____	=	कार्यहन्तारं प्रत्यक्षे
iii. _____	+	_____	=	किं दूरम्
ख. यथा — सम्मानः	+	न	=	सम्मानो न
i. पयः	+	मुखम्	=	
ii. _____	+	_____	=	को विदेशः
iii. _____	+	_____	=	धर्मो मित्रम्

ग. संयोगमसंयोगं वा कुरुत

यथा — कुलम्	+	आख्याति	=	कुलमाख्याति
देशम्	+		=	देशमाख्याति
	+	आख्याति	=	स्नेहमाख्याति
	+		=	धनमिच्छन्ति

### 3. श्लोकांशान् मेलयत

क	ख
यस्मिन्देसे न सम्मानो	निर्गन्धा इव किंशुकाः।
आवारः कुलमाख्याति	क्रमशः पूर्यते घटः।
कोऽतिभारः समर्थानाम्	धर्मो मित्रं मृतस्य च।
अधमा धनमिच्छन्ति	विषकुम्भं पयोमुखम्।
जलबिन्दुनिपातेन	धनमानौ च मध्यमाः।
व्याधितस्यौषधं मित्रम्	देशमाख्याति भाषणम्।
विद्याहीना न शोभन्ते	न वृत्तिर्न च बान्धवाः।
वर्जयेत्तादृशं मित्रम्	किं दूरं व्यवसायिनाम्।

### 4. अधोलिखितवाक्येषु कर्मपदैः रिक्तस्थानानि पूरयत

क. मनुष्यः परोक्षे कार्यहन्तारं	वर्जयेत्।
ख. सम्भ्रमः	आख्याति।
ग. उत्तमाः	इच्छन्ति।
घ. वपुः	आख्याति।
ङ. मध्यमाः	इच्छन्ति।

### 5. विशेष्यैः सह उचितानि विशेषणानि योजयतु

विशेष्याणि	विशेषणानि
विषकुम्भम्	निर्गन्धाः
धर्मः	सम्भ्रमः
स्नेहस्य परिचायकः	मृतस्य मित्रम्
किंशुकाः	पयोमुखम्

### 6. तत् पदं रेखाङ्कितं कुरुत

क. यत्र षष्ठी विभक्तिः नास्ति  
व्यवसायिनाम्, महताम्, सर्वविद्यानाम्, प्रियवादिनाम्

- ख. यत्र द्वितीया विभक्तिः नास्ति  
कार्यहन्तारम्, प्रियवादिनाम्, औषधम्, मानम्
- ग. यत्र प्रथमा विभक्तिः नास्ति  
विद्यागमः, वपुः, वृत्तिः, इव
- घ. यत्र सप्तमी विभक्तिः नास्ति  
परोक्षे, प्रत्यक्षे, पूर्यते, भोजने।
7. अधः श्लोकानाम् अपूर्णोऽन्वयः प्रदत्तः। पाठमाधृत्य रिक्तस्थानेषु अन्वयं पूरयत
- क. प्रवासेषु मित्रं \_\_\_\_\_, गृहेषु च \_\_\_\_\_ भार्या, \_\_\_\_\_ मित्रम्  
औषधम्, \_\_\_\_\_
- ख. \_\_\_\_\_ क्रमशः \_\_\_\_\_ पूर्यते। स \_\_\_\_\_ धर्मस्य \_\_\_\_\_ च  
हेतुः \_\_\_\_\_ ( अस्ति )।
- ग. समर्थानां \_\_\_\_\_, व्यवसायिनां किं \_\_\_\_\_, सविद्यानां कः \_\_\_\_\_,  
\_\_\_\_\_ कः परः ( भवति )।

### योग्यताविरतारः

#### क. कविपरिचयः

‘नीतिमौक्तिकानि’ इति पाठः ‘चाणक्यनीतिः’ इति ग्रन्थात् सङ्कलितः। अस्य प्रणेता आचार्यः चाणक्योऽस्ति। स एको महान् मनीषी राजनीतिज्ञश्च आसीत्। स चन्द्रगुप्तमौर्यस्य प्रधानामात्य आसीत्। स मगधदेशीयनन्दैः शासितां राज्यसत्तां विनाश्य तत्स्थाने मौर्यसाम्राज्यम् अस्थापयत्। नन्दानां शासनकालः शतवर्षाणि यावत् आसीत्। चाणक्योऽन्तिमेषु द्वादशवर्षेषु अष्टनन्दानां संहारम् अकरोत्। कौटिल्यो, विष्णुगुप्तः कौटिल्यश्चेत्यादीनि चाणक्यस्य अपराणि नामानि। राजनीतिविषयकमपूर्वम् अर्थशास्त्राख्यं ग्रन्थं रचयित्वा चाणक्यः संस्कृतसाहित्येऽमरत्वं प्राप। अर्थशास्त्रस्य अन्ते तेन स्वविषये लिखितम्

येन शास्त्रं च शास्त्रं च नन्दराजगता च भूः।

अमर्षेणोद्धृतान्याशु तेन शास्त्रमिदं कृतम् ॥

#### ख. ग्रन्थपरिचयः

‘चाणक्यनीतिः’ राजनीतिशास्त्रविषयको ग्रन्थः। अस्मिन् ग्रन्थे सप्तदश अध्यायाः, 340 श्लोकाश्च सन्ति। अस्मिन् राजनीतिः धर्मशास्त्रोक्तनियमानुसारं वर्णिता। शास्त्ररचनाया आरम्भे एव चाणक्येन स्वयमेव उद्घोषितम्

तदहं सम्प्रवक्ष्यामि लोकानां हितकाम्यया।

यस्य विज्ञानमात्रेण सर्वज्ञत्वं प्रपद्यते॥

नूनं ज्ञानसागर एष चाणक्यनीतिनामा ग्रन्थः। अस्य पठनेन नरो व्यवहारकुशलो जायते।

ग. 'इव' शब्दस्य तुल्यार्थे प्रयोगः

निर्गन्धाः इव किंशुकाः।

गृहीत इव केशेषु मृत्युना धर्गमाचरेत्।

चक्रारपंक्तिरिव (चक्रारपंक्तिः + इव) गच्छति भाग्यपंक्तिः।

दिनस्य पूर्वार्धपरार्धभिन्ना छायेव (छाया + इव) मैत्री खलसज्जनानाम्।

घ. व्यवसायिन्, प्रियवादिन्, विद्यार्थिन् इत्यादिषु नकरान्तशब्देषु द्वितीयाविभक्तेः एकवचने षष्ठीविभक्तेः बहुवचने च केवलं मध्ये अकारमात्रभेदो वर्तते। अत एतादृशाः प्रयोगा अवधानपूर्वकं कर्तव्याः —

शब्दाः	द्वितीयैकवचनम्	षष्ठीबहुवचनम्
व्यवसायिन्	व्यवसायिनम्	व्यवसायिनाम्
प्रियवादिन्	प्रियवादिनम्	प्रियवादिनाम्
विद्यार्थिन्	विद्यार्थिनम्	विद्यार्थिनाम्
दानिन्	दानिनम्	दानिनाम्
गुणिन्	गुणिनम्	गुणिनाम्

ङ विविधविषयकानि अधोदत्तानि पद्यानि पठनीयानि स्मरणीयानि च सुहृद्

- अविचार्यं प्रियं कुर्यात् तन्मित्रं मित्रमुच्यते।
- आपत्काले तु सम्प्राप्ते यन्मित्रं मित्रमेव तत्॥ (पञ्चतन्त्रम्)
- आपत्सु मित्रं जानीयाद् युद्धे शूरं धने शुचिम्।  
भार्या क्षीणेषु वित्तेषु व्यसनेषु च बान्धवान्॥ (हितोपदेशः)
- न कश्चित्कस्यचिन्मित्रं न कश्चित् कस्यचिद् रिपुः।  
व्यवहारेण जायन्ते मित्राणि रिपवस्तथा॥ (हितोपदेशः)
- न विश्वसेद् कुमित्रे च मित्रे चापि न विश्वसेत्।  
कदाचित्कुपितं मित्रं सर्वं गुह्यं प्रकाशयेत्॥ (चाणक्यनीतिः)

### विद्या

- किं कुलेन विशालेन विद्याहीनस्तु यो नरः।
- क्षणत्यागे कुतो विद्या, कणत्यागे कुतो धनम्। (समया.)
- विद्यातुराणां न सुखं न निद्रा। (सु.र.भा.)
- विद्यारत्नेन यो हीनः स हीनः सर्ववस्तुषु। (हितो.)
- अनभ्यासे विषमविद्या। (चाणक्यः)

### धर्मः

- सर्वेषामपि धर्माणां सदाचारः प्रशस्यते।
- धर्मेण हीनाः पशुभिः समानाः। (हितो.)
- चलाचले हि संसारे धर्म एको हि निश्चलः। (चाणक्यनीतिः)
- धर्मस्य त्वरिता गतिः। (पञ्चतन्त्रम्)
- धृतिः क्षमा दमोऽस्तेयं शौचमिन्द्रियनिग्रहः।  
धीर्विद्या सत्यमक्रोधो दशकं धर्मलक्षणम्॥

### विद्वान्

- झटिति पराशयवेदिनो हि विज्ञाः। (नैषध.)
- विद्वान् सर्वत्र पूज्यते। (हितो.)
- विद्वान् प्रशस्यते लोके विद्वान् सर्वत्र गौरवम्। (चाणक्यनीतिः)
- अनुक्तागप्यूहति पण्डितो जनः। (पञ्चतन्त्रम्)
- यो वै युवाप्यधीयानस्तं देवाः स्थविरं विदुः। (मनुस्मृतिः)
- यत्र विद्यागमो नास्ति, यत्र नास्ति धनागमः।  
यत्र देहसुखं नास्ति, न तत्र निमिषं वसेत् ॥ (नराभरणम्, 18)

तृतीयः पाठः

## शिकतासेतुः

[प्रस्तुत पाठ सोमदेवरचित कथासरित्सागर के सप्तम लम्बक पर आधारित है। यहाँ तपोबल से विद्या पाने के लिए प्रयत्नशील तपोदत्त नामक किसी द्विज की कथा वर्णित है। उसको समुचित मार्गदर्शन हेतु वेष बदलकर इंद्र उसके पास आते हैं और पास ही गंगा में बालू से सेतुनिर्माण के कार्य में जुट जाते हैं। उन्हें वैसा करते देख तपोदत्त उनका उपहास करता हुआ कहता है – ‘अरे ! किसलिए गंगा के जल में व्यर्थ ही बालू से पुल बनाने का प्रयत्न कर रहे हो?’ इंद्र उन्हें उत्तर देते हैं – यदि पढ़ने, सुनने और अक्षरों की लिपि के अभ्यास के बिना तुम विद्या पा सकते हो तो बालू से पुल बनाना भी संभव है। इंद्र के अभिप्राय को जानकर तपोदत्त तपस्या करना छोड़कर गुरुजनों के मार्गदर्शन में विद्या का ठीक-ठीक अभ्यास करने के लिए गुरुकुल चल देता है॥]

(एकाङ्कम्)

(ततः प्रविशति तपस्यारतः तपोदत्तः)

तपोदत्तः : अहमस्मि तपोदत्तः। बाल्ये पितृचरणैः क्लेश्यमानोऽपि  
विद्यां नाऽधीतवानस्मि। तस्मात् सर्वैः कुटुम्बिभिः मित्रैः  
ज्ञातिजनैश्च गर्हितोऽभवम्।

(उर्ध्वं निःश्वस्य)

हा विधे! किमिदम्मया कृतम्? कीदृशी दुर्बुद्धिरासीत्तदा!  
एतदपि न चिन्तितं यत् –



परिधानरलङ्कारैर्भूषितोऽपि न शोभते ।

नरो निर्मणिभोगीव सभायां यदि वा गृहे ॥१॥

(किञ्चिद् विमृश्य)

भवतु, किमेतेन? दिवसे उद्भ्रान्तः सन्ध्यां यावद् यदि गृहमुपैति  
तदपि वरम्। नाऽसौ भ्रान्तो मन्यते। एष इदानीं तपश्चर्यया विद्यामवाप्तुं  
प्रवृत्तोऽस्मि।

(जलोच्छलनध्वनिः श्रूयते)

अये कुतोऽयं कल्लोलोच्छलनध्वनिः? महामत्स्यो मकरो  
वा भवेत्। पश्यामि तावत्।

(पुरुषमेकं सिकताभिः सेतुनिर्माणप्रयासं कुर्वाणं दृष्ट्वा सहासम्)



हन्त ! नास्त्यभावो जगति  
मूर्खाणाम् ! तीव्रप्रवाहायां नद्यां  
मूढोऽयं सिकताभिः सेतुं निर्मातुं  
प्रयतते !

(साट्टहासं पार्श्वमुपेत्य)

भो महाशय ! किमिदं विधीयते !  
अलमलं तव श्रमेण। पश्य,

रामो बबन्ध यं सेतुं शिलाभिर्मकरालये ।

विदधद्बालुकाभिस्तं यासित्त्वमतिरामताम्॥२॥

चिन्तय तावत्। सिकताभिः क्वचित्सेतुः कर्तुं युज्यते?

पुरुषः : भोस्तपस्विन् ! कथं मामुपरुणत्सि। प्रयत्नेन किं न सिद्धं भवति?  
काऽवश्यकता शिलानाम्? सिकताभिरेव सेतुं करिष्यामि  
स्वसंकल्पदृढतया।

- तपोदत्तः : आश्चर्यम् ! सिकताभिरेव सेतुं करिष्यसि? सिकता जलप्रवाहे  
स्थास्यन्ति किम्? भवता चिन्तितं न वा?
- पुरुषः : (सोत्प्रासम्) चिन्तितं चिन्तितम्। सम्यक् चिन्तितम्। नाहं  
सोपानमार्गैरदृढमधिरोढुं विश्वसिमि। समुत्प्लुत्यैव गन्तुं क्षमोऽस्मि।
- तपोदत्तः : (सव्यङ्ग्यम्)  
साधु साधु ! आज्जनेयमप्यतिक्रामसि !
- पुरुषः : (सविमर्शम्)  
कोऽत्र सन्देहः? किञ्च,  
विना लिप्यक्षरज्ञानं तपोभिरेव केवलम्।  
यदि विद्या वशे स्युस्ते, सेतुरेष तथा मम ॥३॥
- तपोदत्तः : (सवैलक्ष्यम् आत्मगतम्)  
अये ! मामेवोद्दिश्य भद्रपुरुषोऽयम् अधिक्षिपति ! नूनं सत्यमत्र  
पश्यामि। अक्षरज्ञानं विनैव वैदुष्यमवाप्तुम् अभिलाषामि ! तदियं  
भगवत्याः शारदाया अवमानना। गुरुगृहं गत्वैव विद्याभ्यासो मया  
करणीयः। पुरुषार्थैरेव लक्ष्यं प्राप्यते।  
(प्रकाशम्)  
भो नरोत्तम ! नाऽहं जाने यत् कोऽस्ति भवान्। परन्तु भवद्भिः  
उन्मीलितं मे नयनयुगलम्। तपोमात्रेण विद्यामवाप्तुं  
प्रयतमानोऽहमपि सिकताभिरेव सेतुनिर्माणप्रयासं करोमि। तदिदानीं  
विद्याध्ययनाय गुरुकुलमेव गच्छामि।  
(सप्रणामं गच्छति)

शब्दार्थाः

सिकता	— बालुका	—	सेत
सेतुः	— बन्धः	—	पुल

तपस्यारतः	—	तपःकुर्वन्	—	तपोलीन
पितृचरणैः	—	तातपादैः	—	पिताजी के द्वारा
क्लेश्यमानः	—	संताप्यमानः	—	व्याकुल किया जाता हुआ
अधीतवान्	—	अध्ययनं कृतवान्	—	पढ़ा
कुटुम्बिभिः	—	परिवारजनैः	—	कुटुम्बियों द्वारा
ज्ञातिजनैः	—	बन्धुबान्धवैः	—	बन्धु-बान्धवों द्वारा
गर्हितः	—	निन्दितः	—	अपमानित किया
निश्वरस्य	—	दीर्घश्वासं गृहीत्वा	—	लम्बी साँस लेकर
दुर्बुद्धिः	—	दुर्मतिः	—	दुष्ट बुद्धिवाला
पराधीनैः	—	परतन्त्रैः	—	सोचकर
उद्भ्रान्तः	—	पथभ्रष्टः	—	उचित मार्ग से दूर
उपैति	—	प्राप्नोति, समीपं	—	जाता है, समीप
		गच्छति		जाता है
भ्रान्तः	—	भ्रमयुक्तः	—	भ्रमयुक्त
तपश्चर्याया	—	तपसा	—	तपस्या के द्वारा
जलोच्छलनध्वनिः	—	जलोर्ध्वगतेः शब्दः	—	पानी के उछलने
				की आवाज
कल्लोलोच्छलन-	—	तरङ्गोच्छलनस्य-	—	तरंगों के उछलने
ध्वनिः		शब्दः		की ध्वनि
कुर्वाणम्	—	कुर्वन्तम्	—	करते हुए
सहासम्	—	हासपूर्वकम्	—	हँसते हुए
सोत्प्रासम्	—	उपहासपूर्वकम्	—	खिल्ली उड़ाते हुए,
				चुटकी लेते हुए
साट्टहासम्	—	अट्टहासपूर्वकम्	—	जोर से हँसकर
अट्टम्	—	अट्टालिकाम्	—	अटारी को
अधिरोढुम्	—	उपरिगन्तुम्	—	चढ़ने के लिए

आञ्जनेयम्	—	हनुमन्तम्	—	अञ्जनिपुत्र हनुमान्
सविमर्शम्	—	विचारसहितम्	—	सोच-विचार कर
सवैलक्ष्यम्	—	सलज्जम्	—	लज्जापूर्वक
वैदुष्यम्	—	पाण्डित्यम्	—	विद्वत्ता
उन्मीलितम्	—	उद्घाटितम्	—	खोल दी

### अस्माभिः किमधीतम्?

- बाल्यकाले पुनःपुनः पित्रा उक्तोऽपि तपोदत्तः विद्याध्ययनं न अकरोत् तस्मात् सर्वैः निन्दितोऽभवत्। अधुना च तपस्यया विद्वान् भवितुम् इच्छति।
- दिवसे उद्भ्रान्तोऽपि जनः सन्ध्यां यावद् यदि गृहं प्रत्यागच्छति तदा भ्रान्तः न कथ्यते।
- तीव्रप्रवाहायां नद्यां सिकताभिः सेतुनिर्माणरतं पुरुषं दृष्ट्वा तपोदत्तः तम् उपहसति।
- पुरुषश्च तं कथयति — “यदि बिना लिप्यक्षरज्ञानेन केवलं तपोभिः एव विद्या तव वशे स्यात् तदा मम सेतुरपि निसन्देहं सिकताभिरेव पूर्णताम् एष्यति” इति।
- तपोदत्तः विचारयितुं विवशः भवति यत् तपोमात्रेण विद्वान् भवितुं मम कल्पनाऽपि सिकतासेतुवदेव अस्ति।
- एवं विमृश्य तपोदत्तः विद्याग्रहणाय गुरुकुलं गतः।



सिकतासेतुः

अभ्यासः

मौखिकः

1. अधोलिखितानां प्रश्नानां उत्तराणि एकेनैव पदेन वदत  
क. 'सिकतासेतुः' इति पाठः कस्मिन् ग्रन्थे आधृतः?  
ख. निरक्षरः नरः कः इव सभायां गृहे वा न शोभते?  
ग. तपोदत्तः कथं विद्यामवाप्तुं प्रवृत्तोऽभवत्?  
घ. नद्याः तीव्रप्रवाहे पुरुषः काभिः सेतुं निर्मातुं प्रयतते स्म?  
ङ. कः शिलाभिः मकरालये सेतुं बबन्ध?  
च. किं विना वैदुष्यस्य अवाप्तिः न सम्भवति?  
छ. इन्द्रेण तपोदत्तस्य किम् उन्मीलितम्?  
ज. केन सर्वं सिद्धं भवति?
2. भिन्नप्रकृतिपदं वदत  
क. अधिरोढुम्, गन्तुम्, सेतुम्, निर्मातुम्।  
ख. कुतः, प्रवृत्तः, भूषितः, गर्हितः।  
ग. चिन्तिता, उन्मीलिता, तपोस्ता, सिकता।  
घ. निःश्वस्य, चिन्तय, विमृश्य, उपेत्य।  
ङ. विश्वसिमि, पश्यामि, करिष्यामि, अभिलाषामि।

लिखितः

1. अधोलिखितानां प्रश्नानाम् उत्तराणि संस्कृतभाषया लिखत  
क. अनधीतः तपोदत्तः कैः गर्हितोऽभवत्?  
ख. कः उद्भ्रान्तः न मन्यते?  
ग. तपोदत्तः पुरुषस्य कां चेष्टां दृष्ट्वा अहसत्?  
घ. केन लक्ष्यं प्राप्यते?  
ङ. यः तपोमात्रेण विद्याम् आप्तुं प्रयतते तस्य प्रयासः कीदृशः कथितः?
2. रेखाङ्कितानि सर्वनामपदानि कस्मै प्रयुक्तानि?  
क. अलमलं तव श्रमेण।  
ख. न अहं सोपानमार्गोऽट्टमधिरोढुं विश्वसिमि।  
ग. यदि विद्या वशे स्युः ते सेतुरेष तथा मम।

घ. चिन्तितं भवता न वा।

ङ. गुरुगृहं गत्वैव विद्याभ्यासो मया करणीयः।

3. अधोलिखितानि कथनानि कः कं कथयति?

कथनानि	कः	कम्
क. हा विधे ! किमिदं मया कृतम्?	_____	_____
ख. भो महाशय ! किमिदं विधीयते!	_____	_____
ग. भोस्तपस्विन् ! कथं माम् उपरुणत्सि।	_____	_____
घ. सिकताः जलप्रवाहे स्थास्यन्ति किम्?	_____	_____
ङ. नाहं जाने कोऽस्ति भवान्?	_____	_____

4. पाठम् आधृत्य रिक्तस्थानानां पूर्तिं कुरुत -

- क. सिकताभिरेव सेतुं करिष्यामि \_\_\_\_\_।  
 ख. अये कुतोऽयं \_\_\_\_\_।  
 ग. गुरुगृहं गत्वा एव \_\_\_\_\_ मया करणीयः।  
 घ. बाल्ये पितृचरणैः क्लेश्यमानोऽपि \_\_\_\_\_ अधीतवानस्मि।  
 ङ. दिवसे \_\_\_\_\_ सन्ध्यां यावद् यदि \_\_\_\_\_ तदपि वरम्।

5. अधोलिखितानि वाक्यानि अनुसृत्य कोष्ठके निर्दिष्टान् अव्ययान् प्रयुज्य वाक्यानि रचयत -

- i. यथा देशः तथा वेषः।  
 \_\_\_\_\_ (यथा-तथा)  
 ii. साधु साधु ! त्वं तु हनुमन्तम् अपि अतिक्रामसि।  
 \_\_\_\_\_ (साधु साधु)  
 iii. त्वया सम्यक् चिन्तितम्।  
 \_\_\_\_\_ (सम्यक्)  
 iv. एषा पत्रिका अधीता भवता न वा?  
 \_\_\_\_\_ (न वा)  
 v. लिप्यक्षरज्ञानं विना विद्या न सिध्यति।  
 \_\_\_\_\_ (विना)

vi. हन्त् ! नास्ति अभावो जगति मूर्खाणाम्।

(हन्त्)

vii. यावद् अग्निः ज्वलति तावत् धूमः निर्गच्छति।

(यावत्-तावत्)

viii. विचित्रे संसारे क्वचित् अतिवृष्टिः क्वचित् अनावृष्टिः।

(क्वचित्)

6. उदाहरणम् अनुसृत्य अधोलिखितविग्रहपदानां समस्तपदानि रचयत

विग्रहपदानि	समस्तपदानि
यथा — संकल्पस्य + सातत्येन	संकल्पसातत्येन
क. अक्षराणां + ज्ञानम्	_____
ख. सिकतायाः + सेतुः	_____
ग. पित्रोः + चरणैः	_____
घ. गुरोः + गृहम्	_____
ङ. विद्यायाः + अभ्यासः	_____

■ उदाहरणम् अनुसृत्य अधोलिखितसमस्तपदानां विग्रहं कुरुत

समस्तपदानि	विग्रहः
यथा — नयनयुगलम्	नयनस्य + युगलम्
क. जलप्रवाहे	_____
ख. तपश्चर्यया	_____
ग. जलोच्छलनध्वनिः	_____
घ. ज्ञातिजनैः	_____
ङ. सेतुनिर्माणप्रयासः	_____

7. क. अव्ययपदैः अन्वयं पूरयत

- यदि परिधानैः अलङ्कारैः भूषितः \_\_\_\_\_ नरः निर्मणिभोगी \_\_\_\_\_  
सभायां गृहे \_\_\_\_\_ शोभते।
- लिप्यक्षरं \_\_\_\_\_ तपोभिः \_\_\_\_\_ ते वशे विद्याःस्युः  
\_\_\_\_\_ मम \_\_\_\_\_ एषः सेतुः।

ख. तृतीयान्तपदैः अन्वयं पूरयत

- iii. रामः मकरालये यं सेतुं \_\_\_\_\_ बबन्ध तं \_\_\_\_\_ विदधद्  
त्वम् अतिरामताम् यासि।

8. सप्रसङ्गं व्याख्यां कुरुत

- क. i. विदधद्बालुकाभिस्तं यासि त्वमतिरामताम्।  
ii. परिधानैरलङ्कारैर्भूषितोऽपि न शोभते।  
iii. प्रयत्नेन किं न सिद्धं भवति।  
iv. तदियं भगवत्या शारदाया अवमानना।  
ख. i. अलमलं तव श्रमेण। ('अलम्' — योगे तृतीया)  
ii. माम् एव उद्दिश्य अधिक्षिपति। (अधि योगे द्वितीया)  
iii. अक्षरज्ञानं विनैव वैदुष्यं प्राप्तुमभिलाषसि।  
(विनायोगे द्वितीया)  
iv. आज्ञनेयम् अपि अतिक्रामसि। (अति योगे द्वितीया)

उपरिलिखितवाक्येषु रेखाङ्कितपदानि उपपदविभक्तोऽउदाहरणानि सन्ति।  
(अधोऽभ्यासार्थं वाक्यानि दीयन्ते)

निर्देशानुसारं कोठकात् पदम् आदाय रिक्तस्थानानि पूरयत

यथा — अलम् चिन्तया।

- i. अलम् \_\_\_\_\_ (भय)  
ii. त्वं व्यर्थम् एव \_\_\_\_\_ अधिक्षिपसि।  
(मित्र)  
iii. किं \_\_\_\_\_ विना परीक्षाम् उत्तरिष्यसि।  
(परिश्रम)  
iv. बालकः \_\_\_\_\_ विना पाठं पठति।  
(अर्थज्ञान)  
v. सूर्यस्य प्रकाशः सर्वान् \_\_\_\_\_ अतिक्रामति।  
(प्रकाश)

ग. तपोमात्रेण ..... गुरुकुलमेव गच्छामि इति। सम्यक् पठित्वा  
प्रश्नद्वयं रचयत



**योग्यताविस्तारः****क. कविपरिचयः**

श्रीसोमदेवभट्टः कश्मीरवासिनः श्रीरामभट्टस्य पुत्र आसीत्। तदा अनन्तदेवः कश्मीरनरेश आसीत्। तस्य पत्न्याः सूर्यमत्याः दुःखनिवारणार्थं मनोविनोदाय च कविना अष्टादशलम्बकेषु कथासरित्सागराख्यो ग्रन्थो विरचितः। अस्य ग्रन्थस्य मूलं महाकवेर्गुणाढ्यस्य बृहत्कथा वर्तते।

**ख. ग्रन्थपरिचयः**

कथासरित्सागरो नाम ग्रन्थः श्रीसोमदेवेन विरचितः। ग्रन्थोऽयम् अनेकासां कथानां महासमुद्र एव। नानाकथाजालप्रसारेण लोकानुरञ्जनमेव कवेः चरमं लक्ष्यम् विविधकाव्योपकरणैरलङ्कृतेऽस्मिन् ग्रन्थेऽष्टादशलम्बकाः सन्ति। मूलकथापुष्ट्यर्थम् अनेका उपकथा वर्णिताः। प्रस्तुतकथा रत्नप्रभानामकात् लम्बकात् सङ्कलिता। गुरोः समीपं गत्वा श्रमेण लिप्यक्षरादिज्ञानार्जनं कर्तव्यं, न केवलं तपश्चर्ययैव तत् कर्तुं शक्यत इत्यस्याः कथाया उपदेशः।

**ग. पर्यायवाचिनः शब्दाः**

इदानीम्	—	अधुना, साम्प्रतम्, सम्प्रति।
जलम्	—	वारि, उदकम्, सलिलम्।
नदी	—	सरित्, तटिनी, तरङ्गिणी।
पुरुषार्थः	—	उद्योगः, उद्यमः, परिश्रमः।

**घ. विलोमशब्दाः**

दुर्बुद्धिः	—	सुबुद्धिः
गर्हितः	—	प्रशंसितः
प्रवृत्तः	—	निवृत्तः
अभ्यासः	—	अनभ्यासः
सत्यम्	—	असत्यम्

**ङ. कृत्-प्रत्ययाः**

क्त्वा प्रत्ययस्य प्रयोगः — 'क्त्वा' इति प्रत्ययः पूर्वकालिकक्रियां बोधयति। अस्य 'क्त्वा' इत्येष एवांशोऽवशिष्यते। यथा —

$$\begin{aligned}\sqrt{\text{दृश्}} + \text{क्त्वा} &= \text{दृष्ट्वा} \\ \sqrt{\text{गम्}} + \text{क्त्वा} &= \text{गत्वा}\end{aligned}$$

ल्यप् प्रत्यय प्रयोगः — यदि धातोः पूर्वम् उपसर्गः प्रयुज्यते तदा क्त्वा इत्येतस्य प्रत्ययस्य स्थाने ल्यप् भवति। य इत्येवांशोऽवशिष्टः भवति।

$$\begin{aligned}\text{यथा — निः} + \sqrt{\text{श्वस्}} + \text{ल्यप्} &= \text{निःश्वस्य} \\ \text{वि} + \sqrt{\text{मृश्}} + \text{ल्यप्} &= \text{विमृश्य} \\ \text{उप} + \sqrt{\text{इ}} + \text{ल्यप्} &= \text{उपेत्य} \\ \text{उत्} + \sqrt{\text{दिश्}} + \text{ल्यप्} &= \text{उद्दिश्य}\end{aligned}$$

तुमुन्-प्रत्यय प्रयोगः — ‘तुमुन्’ इत्येतस्य ‘तुम्’ इत्येव भागोऽवशिष्यते।

$$\begin{aligned}\text{यथा — } \sqrt{\text{कृ}} + \text{तुमुन्} &= \text{कर्तुम्} \\ \sqrt{\text{गम्}} + \text{तुमुन्} &= \text{गन्तुम्} \\ \text{अधि} + \sqrt{\text{रुह्}} + \text{तुमुन्} &= \text{अधिरोढुम्} \\ \text{निर्} + \sqrt{\text{मा}} + \text{तुमुन्} &= \text{निर्मातुम्} \\ \text{अव} + \sqrt{\text{आप्}} + \text{तुमुन्} &= \text{अवाप्तुम्}\end{aligned}$$

#### घ. आत्मगतम्

एषः नाटकेषु प्रयुक्तः पारिभाषिकः शब्दः। यदा नटोऽभिनेता वा रंगमञ्चे स्वकथनम् अन्यान् श्रावयितुं न इच्छति, मनसि एव चिन्तयति तदा तत् कथनम् आत्मगतम् इति भण्यते।

#### छ. प्रकाशम्

यदा नटोऽभिनेता वा रंगमञ्चे स्ववार्तां मनसि चिन्तयित्वा दर्शकानां समक्षं प्रकटीकरोति तदा तस्य सा वार्ता प्रकाशम् इति शब्देन संसूच्यते।

#### ज. अतिरामताम्

राममतिक्रम्य अतिरामम्, तस्य भावोऽतिरामता, ताम्। रामस्य अतिक्रमणं। अत्र रामस्य सागरे प्रस्तारैः सेतुनिर्माणस्य घटनायाः संज्ञेनो वर्तते। तपोदत्तस्य अस्य कथनस्य अभिप्रायोऽयं वर्तते यत् रामस्तु लङ्कां गन्तुं पाषाणैः समुद्रे सेतुनिर्माणम् अकरोत् परं हे द्विजश्रेष्ठ ! भवता तु सिकताभिः नद्यां सेतुनिर्माणेन रामोऽपि अतिक्रान्तः।

### इ. आञ्जनेयम्

अञ्जनायाः पुत्रः इति आञ्जनेयः हनुमान् इत्यर्थः, तम्। हनुमान् उत्प्लुत्य कुत्रापि गन्तुं समर्थः आसीत् अतः यदा इन्द्रः कथयति यदहं सोपानगमने विश्वासं न करोमि अपितु उत्प्लुत्य एव गन्तुं समर्थोऽस्मि इति तदा तपोदत्तः पुनरुपहासं करोति यत् पूर्वं त्वम् सेतुनिर्माणे रामं सम्प्रति च उत्प्लवने हनुमन्तम् अतिक्रान्तुम् इच्छसि।

### ज. अक्षरज्ञानस्य माहात्म्यम्

- विद्या नाम नरस्य रूपमधिकं प्रच्छन्नगुप्तं धनम्।
- विद्या भोगकरी यशःसुखकरी विद्या गुरुणां गुरुः।
- विद्या बन्धुजनो विदेशगमने विद्या परं देवतम्।
- विद्या राजसु पूजिता न तु धनं विद्याविहीनः पशुः।
- विद्या विवादाय धनं मदाय शक्तिः परेषां परपीडनाय।  
खलस्य साधोः विपरीतमेतज्ज्ञानाय दानाय च रक्षणाय॥
- गतेऽपि वयसि ग्राह्या विद्या सर्वात्मना बुधैः।  
यद्यपि स्यान्न फलदा सुलभा सान्यजन्मनि॥
- किं किं न साधयति कल्पलतेव विद्या।
- विद्याधनं सर्वधनप्रधानम्।
- यः पठति लिखति पश्यति परिपृच्छति पण्डितानुपाश्रयति।  
तस्य दिषाकर किरणैः नलिनीदलमिव विकास्यते बुद्धिः॥

चतुर्थः पाठः

षड्रसाः

[प्रस्तुत पाठ आयुर्वेद के प्रसिद्ध ग्रंथ 'चरकसंहिता' से संकलित किया गया है। इसमें मधुर, अम्ल, लवण, कटुक, तिक्त तथा कषाय - इन छः रसों के सम्यक् प्रयोग से होने वाले लाभों तथा अत्यधिक प्रयोग से होने वाली हानियों का प्रतिपादन किया गया है, जिससे इनके अतिशय उपयोग से जायमान हानियों से बचते हुए तथा समुचित उपयोग से लाभ उठाया जा सके। इस प्रकार इस पाठ में छः रसों के विषय में अतिमहत्त्वपूर्ण जानकारी दी गई है।]

मधुरः, अम्लः, लवणः, कटुकः, तिक्तः, कषायश्च इति षड्रसा भवन्ति। तत्र मधुरो रसः रुधिरमांसास्थिवर्धनः आयुष्यः केश्यः कण्ठ्यः दाहमूर्च्छाप्रशमनश्च। अत्यर्थमुपयुज्यमानश्चायं स्थूलतां आलस्यमतिस्वप्नं दौर्बल्यम् इत्येवमादीन् विकारानुपजनयति।

अम्लो रसो भुक्तं रोचयति, अग्निं दीपयति, देहम् ऊर्जयति, बलं वर्धयति, हृदयं च तर्पयति। अत्यर्थमुपयुज्यमानस्त्वयं दन्तान् तर्षयति, रक्तं दूषयति, कायं शिथिलीकरोति, परिदहति कण्ठमुरो हृदयं च।

लवणो रसः पाचनः, वातहरः, सर्वरसविरोधी, सर्वशरीरावयवान् मृदूकरोति, रोचयत्याहारं च। अत्यर्थमुपयुज्यमानश्चायं मूर्च्छयति, तापयति, विषं च वर्धयति।

कटुको रसो वक्त्रं शोधयति, चक्षुर्विरेचयति, ग्रणानवसादयति, कृमीन् हिनस्ति। अत्यर्थमुपयुज्यमानश्चायं कण्ठं परिदहति, शरीरतापमुपजनयति, बलं क्षिणोति, तृष्णां च जनयति।

तिक्तो रसः विषध्नः कृमिघ्नो ज्वरघ्नः पाचनश्च। अत्यर्थमुपयुज्यमानश्चायं  
रुधिरमांसमुच्छोषयति, बलमादत्ते, कर्शयति, मोहयति वातविकारान् चोपजनयति।

कषायो रसः संशमनः सन्धानकरः शरीरक्लेदस्योपयोक्ता रुक्षःशीतश्च।  
अत्यर्थमुपयुज्यमानस्त्वयं हृदयं पीडयति, वाचं निगृह्णाति, कर्शयति च।

इत्येवमेते षड्रसाः पृथक्त्वेनैकत्वेन वा मात्रशः सम्यगुपयुज्यमाना शरीरस्य  
उपकाराय भवन्ति।

### शब्दार्थाः

रुधिरम्	—	रक्तम्	—	खून
अस्थि	—	अस्थि	—	हड्डी
आयुष्यः	—	आयुवर्धकः	—	आयु देने वाला
केश्यः	—	केशेभ्यः हितकरः	—	केशवर्धक
कण्ठ्यः	—	कण्ठेभवः	—	कण्ठ से बोला जाने वाला
अत्यर्थम्	—	अत्यधिकम्	—	अत्यधिक
उपजनयति	—	उत्पादयति	—	उत्पन्न करता है
भुक्तम्	—	खादितम्	—	खाया हुआ
रोचयति	—	रुचिकरं करोति	—	रोचक बनाता है
दीपयति	—	वर्धयति	—	बढ़ाता है
तर्षयति	—	तृषां ददाति	—	प्यास बढ़ाता है
अवयवान्	—	अङ्गानि	—	अंगों को
मृदूकरोति	—	कोमलीकरोति	—	कोमल बनाता है
वक्त्रम्	—	मुखम्	—	मुख को
शोधयति	—	शुद्धिं करोति	—	शुद्धि करता है
विरेचयति	—	विरेचनं करोति	—	पचाता है
अवसादयति	—	व्याकुलयति	—	व्याकुल करता है
कृमीन्	—	कीटान्	—	कीड़ों को
हिनस्ति	—	नाशयति	—	नष्ट करता है
क्षिणोति	—	दुर्बलीकरोति	—	दुर्बल करता है, कम करता है
विषध्नः	—	विषं हन्ति इति	—	विष का नाशक

उच्छोषयति	—	शोषम् उत्पादयति	—	सूजन उत्पन्न करता है
कर्शयति	—	कृशं करोति	—	कृश बनाता है
संशामनः	—	शान्तिकारकः	—	शान्त करने वाला
सन्धानकरः	—	आधायकः	—	जोड़ने वाला, बढ़ाने वाला
क्लेदस्य	—	स्येदस्य	—	पसीने का
रुक्षः	—	अक्लिन्नः	—	रुखा
निगृह्णति	—	वशीकरोति	—	पकड़ता है, रोकता है
मात्रशः	—	अंशशः	—	मात्रा के अनुसार

अस्माभिः किम् अधीतम्?

- षड्रसानां नामानि — मधुरः, अम्लः, लवणः, कटुकः, तिक्तः, कषायः चेति।
- सर्वेषां रसानां समुचितप्रयोगः लाभकरः भवति, अधिकप्रयोगेण च शरीरं विविधं कष्टम् अनुभवति।



## अभ्यासः

## मौखिकः

1. अधोलिखितानां प्रश्नानाम् उत्तराणि एकेनैव पदेन वदत
  - क. कति रसाः भवन्ति?
  - ख. कः रसः रुधिरमांसास्थिवर्धनः?
  - ग. कः रसः भुक्तं रोचयति?
  - घ. वातहरः कः रसः भवति?
  - ङ. कृमीन् कः रसः हिनस्ति?
  - च. विषघ्नः कः रसः अस्ति?
  - छ. अत्यर्थम् उपयुज्यमानः कः रसः हृदयं पीडयति?
  - ज. सम्यगुपयुज्यमानाः षड्रसाः कस्य उपकाराय भवन्ति?

## लिखितः

1. अधोलिखितानां प्रश्नानां उत्तराणि संस्कृतभाषया लिखत
  - क. अयं पाठः कस्मात् ग्रन्थात् संकलितः? कश्च तस्य लेखकः?
  - ख. मधुरः कदा स्थूलतादीन् विकारान् उपजनयति?
  - ग. अम्लः रसः किं किं हितं करोति?
  - घ. कटुकः रसः व्रणान् किं करोति?
  - ङ. तिक्तस्य रसस्य के गुणाः सन्ति?
  - च. कः रसः शरीरक्लेदस्योपयोक्ता अपि भवति?
  - छ. षड्रसाः कदा उपकाराय भवन्ति?
  - ज. षड्रसाः कदा दोषकरा भवन्ति?

## 2. क. सन्धिं कुरुत

मधुरः	+	रसः	=	_____
कटुकः	+	रसः	=	_____
पाचनः	+	च	=	_____
कषायः	+	च	=	_____
शीतः	+	च	=	_____

## ख. सन्धिविच्छेदं कुरुत

यथा — रोचयत्याहारम् =	रोचयति	+	आहारम्
इत्येवम् =	_____	+	_____
इत्यादिः =	_____	+	_____
अत्यर्थम् =	_____	+	_____

## 4. कोष्ठकाद् उचितपदम् आदाय रिक्तस्थानपूर्तिं कुरुत

- क. मधुरः रसः आयुष्यः केश्यः \_\_\_\_\_ च भवति।  
(कण्ठ्य/वातहरः)
- ख. अम्लो रसः \_\_\_\_\_ दीपयति।  
(शरीरतापम्/अग्निम्)
- ग. अत्यर्थमुपयुज्यमानः \_\_\_\_\_ मूर्च्छयति।  
(लवणः/कटुकः)
- घ. तिक्तः रसः विषघ्नः \_\_\_\_\_ च भवति।  
(बलघ्नः/कृमिघ्नः)
- ङ. अत्यर्थमुपयुज्यमानः \_\_\_\_\_ हृदयं पीडयति।  
(कषायः/अम्लः)

## 5. अर्थमेलनं कुरुत

क	ख
क. उरः	भोजनम्
ख. रुधिरम्	नेत्रम्
ग. आहारम्	कायम्
घ. चक्षुः	क्षीणताम्
ङ. देहम्	वक्षःस्थलम्
च. दौर्बल्यम्	रक्तम्

## 6. अधोलिखितैः क्रियापदैः वाक्यानि पूरयत

रोचयति, वर्धयति, जनयति, पीडयति, कर्शयति, दूषयति, हिनस्ति

यथा — अम्लः रसः मुक्तम् रोचयति।

क. मधुरस्य आधिक्यम् आलस्यं \_\_\_\_\_।



- ख. कटुकः रसः कृमीन् \_\_\_\_\_।  
 ग. अधिकः कषायः रसः हृदयं \_\_\_\_\_।  
 घ. अम्लः रसः बलं \_\_\_\_\_।  
 ङ. अधिकं प्रयुक्तः तिक्तः रसः \_\_\_\_\_।

7. अत्र मञ्जूषायां प्रत्येकं रसस्य त्रयो गुणाः त्रयो दोषाः च प्रदत्ताः सन्ति। तान् प्रत्येकं रसस्य समक्षं लिखत

- क. बलवर्धकः, अग्निदीपकः, हृदयतर्पकः, रक्तदूषकः, हृदयदाहकः, कण्ठदाहकः।  
 ख. आयुष्यः, केश्यः, कण्ठ्यः, आलस्यकरः, स्थूलताजनकः, दीर्बल्यकारकः।  
 ग. यक्त्रशोधकः, नेत्रविरेचकः, कृमिनाशकः, बलक्षयकारकः, कण्ठपरिदाहकः, शरीरतापकरः।  
 घ. विषध्नः, कृमिध्नः, ज्वरध्नः, रुधिरमांसशोषकः, कर्शकः, वातविकारजनकः।  
 ङ. संशमनः, रुक्षः, शीतः, हृदयपीडकः, वाङ्मिन्प्रहकरः, कर्शकः।  
 च. पाचनः, वातहरः, आहाररोचकः, मूर्च्छाकरः, तापकरः, विषवर्धकः।

गुणाः (सम्यक् प्रयोगे)

दोषाः (अधिकप्रयोगे)

यथा — मधुरः — आयुष्यः, केश्यः, कण्ठ्यः च आलस्यकरः, स्थूलताजनकः, दीर्बल्यकारकः च

- क. अम्लः — \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ च \_\_\_\_\_,  
 \_\_\_\_\_, \_\_\_\_\_ च  
 ख. लवणः — \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ च \_\_\_\_\_,  
 \_\_\_\_\_, \_\_\_\_\_ च  
 ग. कटुकः — \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ च \_\_\_\_\_,  
 \_\_\_\_\_, \_\_\_\_\_ च  
 घ. तिक्तः — \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ च \_\_\_\_\_,  
 \_\_\_\_\_, \_\_\_\_\_ च  
 ङ. कषायः — \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ च \_\_\_\_\_,  
 \_\_\_\_\_, \_\_\_\_\_ च

### योग्यताविस्तारः

#### क. कविपरिचयः

चरकः आयुर्वेदस्य 'चरकसंहिता' इत्याख्यस्य ग्रन्थस्य रचयिता। अयं विशुद्धनाम्नः ऋषेः पुत्रः अनन्तसंज्ञकनागस्य चावतारः आसीत्। अतोऽयं नागवंशीय एव सम्भाव्यते। भारतस्य पश्चिमोत्तरप्रदेशस्य वर्णनम् अस्मिन् ग्रन्थेऽनेकत्र दृश्यते। अनेन प्रतीयते यत् चरकः तस्यैव प्रदेशस्य निवासी आसीत्।

#### ख. ग्रन्थपरिचयः

उपलब्धासु आयुर्वेदीयसंहितासु सर्वश्रेष्ठः कायचिकित्साप्रधानोऽयं ग्रन्थः। अस्मिन् ग्रन्थे चिकित्साविज्ञानस्य मौलिकतत्त्वानां यादृशम् उत्तमं विवेचनं लभ्यते तादृशं न अन्यत्र कुत्रचिदपि अवलोक्यते।

#### ग. भागविस्तारः

षड्रस सम्बन्धिवस्तूनि

रसः

मधुरः



कदलीफलम्

अम्लः



तिन्तिडीफलम्

लवणः



वास्तूकम्, चणकशाकः

रसः

कटुकः



निम्बवृक्षः,

तिक्तः



कृष्णमरिचम्,

कषायः



आमलकम्,



कारवेल्लम्



हरितमरिचम्



हरीतिक्ती

## घ. भाषिकविस्तारः

- i. अस्मिन् पाठे बहूनि प्रेरणार्थकक्रियापदानि प्रयुक्तानि। धातोः प्रेरणार्थके णिच् – प्रत्यये कृते सति प्रेरणार्थकं क्रियापदं जायते यथा शिक्षकः छात्रं पाठयति; अत्र 'पाठयति' इति प्रेरणार्थकं क्रियापदम् वर्तते –

धातवः	सामान्यं क्रियापदम्	प्रेरणार्थकं क्रियापदम्
√जन्	जायते	जनयति
√रुच्य	रोचते	रोचयति
√वृध्	वर्धते	वर्धयति
√गम्	गच्छति	गमयति
√तप्	तपति	तापयति
√दीप्	दीप्यते	दीपयति
√मूर्च्छ्	मूर्च्छति	मूर्च्छयति

- ii. अधोलिखितपदानां विग्रहवाक्यानि समासनामानि च अवगच्छत –

पदानि	विग्रहवाक्यानि	समासनामानि
क. शरीरतापम्	शरीरस्य+तापम्	षष्ठीतत्पुरुषः
ख. रुधिरमांसास्थिवर्धनः	रुधिरम् च मांसम् च अस्थि च रुधिरमांसास्थीनि तेषां वर्धनम्	द्वन्द्वसमासः
ग. दाहमूर्च्छाप्रशमनः	दाहः च मूर्च्छा च दाहमूर्च्छं तयोः प्रशमनः	द्वन्द्वसमासः
घ. अतिस्वप्नम्	अत्यधिकः स्वप्नः तम्	कर्मधारय
ङ. रुधिरमांसम्	रुधिरं च मांसं च	द्वन्द्वसमासः

पञ्चमः पाठः

## लोकमान्यः तिलकः

[स्वतंत्रता-संग्राम में हमारे देश के जिन महापुरुषों ने भाग लिया उनमें लोकमान्य तिलक का नाम बड़े आदर से लिया जाता है। वे संस्कृत के प्रख्यात विद्वान् थे। उन्होंने भारत की जनता को एक नाश दिया – स्वराज्य मेरा जन्मसिद्ध अधिकार है। तिलक के इस नारे ने स्वतंत्रता-सेनानियों को इतना प्रेरित किया कि उनका आंदोलन आग की चिंगारी की तरह पूरे देश में फैल गया। फलस्वरूप दासता की जंजीरें जर्जर होने लगीं और अंग्रेज़ शासक काँप उठे। तिलक जैसे राष्ट्रभक्तों के सत्प्रयासों से ही कालान्तर में हमारा देश स्वतंत्र हुआ। तिलक अग्रणी स्वतंत्रता-सेनानी होने के साथ साथ संस्कृत तथा गणित-ज्योतिष के प्रकांड पंडित थे। इनके द्वारा निश्चित किया गया वेदों का काल-निर्णय बहुत ही महत्त्वपूर्ण है।]

श्रीबालगङ्गाधरतिलकः महान् राष्ट्रसेवी देशभक्तश्च आसीत्। अस्य जन्म 1856 ख्रिस्ताब्दे जुलाईमासस्य त्रयोविंशे दिने महाराष्ट्रस्य रत्नगिरिनामके ग्रामेऽभवत्। बाल्यकालादेव सः प्रखरबुद्धिःसूक्ष्मदृष्टिश्च आसीत्। कालान्तरे स गणितस्य, ज्योतिषशास्त्रस्य संस्कृतव्याकरणस्य च प्रकाण्डः पण्डितः समजायत। विधिस्नातकपरीक्षाम् उत्तीर्य स देशस्य पारतन्त्र्यदुःखं निवारयितुं तत्परोऽभूत्।

असौ एकां शिक्षासमितिं स्थापयित्वा महाराष्ट्रे महान्तं शिक्षाप्रचारम् अकरोत्। जनजागरणाय 'केसरी' 'मराठा' चेति द्वयोः पत्रयोः सम्पादनमपि अकरोत्। तिलकः शिवाजिगणेशोत्सवौ च प्रारभत। तस्य एवंविधैः प्रयासैः देशस्य जनाः प्रबुद्धाः जाताः। विविधं विभक्ते समाजे स्नेहसहयोगसमत्वभावना चापि समुत्पन्ना।

वैदेशिकानामत्याचारैः पीडितानां भारतीयानां समुद्धाराय भारतस्य स्वातन्त्र्यमभिलक्ष्य राष्ट्रभक्तः तिलकः अघोषयत् यत् — “स्वराज्यं गृहीत्वा एव शान्ता भविष्याम। कार्यं वा साधयिष्यामः, देहं वा पातयिष्यामः। स्वराज्यमस्माकं जन्मसिद्धोऽधिकारः” इति।



तिलकस्येयं घोषणा हतोत्साहेषु हृदयेषु अपि उत्साहम् अजनयत् । तच्छ्रुत्वा निखिलोऽपि भारतदेशः स्वराज्यप्राप्तये प्रयत्नशीलः सञ्जातः। परिणामतोऽसौ ब्रिटिशशासनेन कारागारे निक्षिप्तः। कारागारे स्थितस्तिलकमहोदयः ‘गीतारहस्यम्’, ‘दि ओरियन्’, इत्याख्यस्य ग्रन्थद्वयस्य निर्माणमप्यकरोत्। एतद् ग्रन्थद्वयमेव तस्य महतीं वैदुषीम् प्रकटयति। एतैः सर्वैः कारणैरेव तिलकमहोदयो लोके ‘लोकमान्य’ इत्युपाधिना प्रसिद्धो जातः।

लोकमान्यस्य तत्सदृशानामन्येषां च महापुरुषाणां प्रयत्नैरेव अस्माकं देशः 1947 वार्षस्यागस्तमासे स्वतन्त्रो जातः। अस्माकं दौर्भाग्याद् अयं महापुरुषः 1920 ख्रिस्ताब्दे दिवं गतः। एवंविधानाम् एव महापुरुषाणां विषये केनापि सत्यमेवोक्तम् —

परोपकारैकधियः स्वसुखाय गतस्पृहाः।

जगद्धिताय जायन्ते मानवाः केऽपि भूतले॥

## शब्दार्थाः

प्रखरबुद्धिः	—	तीव्रबुद्धिः	—	तीव्र बुद्धि वाला, बुद्धिमान्
सूक्ष्मदृष्टिः	—	विवेकपूर्णदृष्टिः	—	प्रत्येक कार्य को ध्यान से देखकर करने वाला
पारतन्त्र्यदुःखम्	—	पराधीनतायाः क्लेशम्	—	परतंत्रता के दुःख को
जनजागरणाय	—	जनानां प्रबोधनाय	—	जनता में जागृति लाने के लिए
स्नेहसहयोगसमत्व- भावना	—	प्रेम्णः परस्परं सहकारित्वस्य समत्वस्य च भावः	—	स्नेह, सहयोग तथा समता की भावना
अभिलक्ष्य	—	दृष्टौ कृत्वा	—	दृष्टि में रखकर, देखकर
हतोत्साहेषु	—	उत्साहहीनेषु	—	उत्साह रहितों में
परोपकारैकधियः	—	परहितमात्रबुद्ध्यः	—	केवल परोपकार करने में संलग्न
गतस्पृहाः	—	इच्छारहिताः	—	इच्छारहित, निष्काम
निक्षिप्तः	—	न्यस्तः	—	रखा हुआ
निखिलः	—	समस्तः	—	सारा, संपूर्ण

## अस्माभिः किमधीतम् ?

- तिलकस्य जन्मसमयः 23.7.1856 ई० आसीत्। जन्मस्थानञ्च महाराष्ट्रस्य रत्नगिरिनामा ग्रामः।
- तिलकः बाल्यकालादेव प्रतिभासम्पन्नः कालान्तरे गणितस्य, ज्योतिषशास्त्रस्य संस्कृतव्याकरणस्य च विद्वान् अभवत्।
- तिलकमहाभागेन घोषणा कृता — ‘स्वराज्यमस्माकं जन्मसिद्धो अधिकारः’ इति।
- तिलकमहाभागेन कृतानि कार्याणि—  
 क. महाराष्ट्रे शिक्षाप्रचाराय शिक्षासमितेः स्थापना।  
 ख. जनजागरणाय ‘केसरी’ ‘मराठा’ चेति पत्रयोः सम्पादनम्।  
 ग. गणेशोत्सवस्य, शिवाज्युत्सवस्य चारम्भः।  
 घ. कारागारे ‘गीतारहस्यम्’, ‘दि ओरियन’ इति ग्रन्थयोः रचना। एतैः सर्वैः कारणैः लोकेन सम्मानितः सः ‘लोकमान्य’ इत्युपाधिना प्रसिद्धोऽभवत्।

अभ्यासः

मौखिकः

1. अधोलिखितानां प्रश्नानाम् उत्तराणि एकेनैव पदेन वदत
  - क. बालगङ्गाधरतिलकस्य जन्म कस्मिन् ग्रामेऽभवत्?
  - ख. बालगङ्गाधरतिलकः कां परीक्षाम् उत्तीर्णाम् अकरोत्?
  - ग. लोकमान्यः कां समितिं स्थापयित्वा शिक्षाप्रचारम् अकरोत्?
  - घ. तिलकः कं कम् उत्सवम् आरभत?
  - ङ. तिलकस्य घोषणा केषु हृदयेषु उत्साहम् अजनयत्?
  - च. तिलकः गीताविषयकस्य कस्य ग्रन्थस्य रचनाम् अकरोत्?
  - छ. तिलकः द्वयोः ग्रन्थयोः रचनां कुत्र अकरोत्?

लिखितः

1. प्रश्नानाम् उत्तराणि संस्कृतभाषया लिखत
  - क. लोकमान्यतिलकः कस्य कस्य विषयस्य प्रकाण्डः पण्डितः आसीत्?
  - ख. लोकमान्यतिलकः जनजागरणाय किम् अकरोत्?
  - ग. तिलकस्य घोषणा का आसीत्?
  - घ. सः कयोः ग्रन्थयोः निर्माणम् अकरोत्?
  - ङ. लोकमान्यतिलकसदृशानां महापुरुषाणां विषये केनापि किम् उक्तम्?
  - च. लोकमान्यस्य प्रयासैः विभक्ते समाजे कीदृशी भावना समुत्पन्ना?

2. सन्धिम्/सन्धिविच्छेदं च कुरुत

क. यथा —	देशभक्तः	+	च	=	देशभक्तश्च
i.		+	च	=	तीक्ष्णदृष्टिश्च
ii.	सर्वः	+	च	=	
ख. यथा —	उत्सवम्	+	च	=	उत्सवं च
i.	एवम्	+	विधेः	=	
ii.		+		=	कार्यं वा

3. उदाहरणानुसारं पर्यायेण रिक्तस्थानानि पूरयत

यथा — जनजागरणार्थम् — जनजागरणाय

क.	समुद्धारार्थम्	—	_____
ख.	सुखार्थम्	—	_____
ग.	जगद्धितार्थम्	—	_____

#### 4. तत्पदं रेखाङ्कितं कुरुत यत्र

क. लङ्लकारः नास्ति —

अकरोत्, अधोषयत्, अजनयत्, अभूत्।

ख. षष्ठी विभक्तिः नास्ति

पीडितानाम्, भारतीयानाम्, महापुरुषाणाम्, सम्पादनम्।

ग. क्त्वा प्रत्ययः नास्ति

तच्छ्रुत्वा, गृहीत्वा, अभिलक्ष्य, स्थापयित्वा।

#### 5. अधोलिखितानि वाक्यानि घटनाक्रमेण योजयत

क. लोकमान्यतिलकः ब्रिटिशशासनेन कारागारे निक्षिप्तः।

ख. तिलकस्य जन्म रत्नगिरिनामके ग्रामेऽभवत्।

ग. तिलकस्य प्रयासैः जनाः प्रबुद्धा जाताः।

घ. अस्माकं दौर्भाग्यादयं 1920 ख्रिस्ताब्दे दिवं गतः।

ङ. सः गणितस्य, ज्योतिःशास्त्रस्य, संस्कृतव्याकरणस्य च प्रकाण्डः पण्डितः समजायत।

च. कारागारे सः ग्रन्थद्वयस्य रचनामकरोत्।

छ. जनजागरणाय सः द्वयोः पत्रयोः सम्पादनमकरोत्।

ज. बाल्यकालादेव सः प्रखरबुद्धिः तीक्ष्णदृष्टिश्च आसीत्।

#### 6. अधोलिखितवाक्येषु कर्मपदैः रिक्तस्थानानि पूरयत

क. तिलकः विधिरनातकस्य \_\_\_\_\_ उत्तीर्णम् अकरोत्।

ख. असौ एकां \_\_\_\_\_ स्थापयित्वा महाराष्ट्रे  
महान्तम् \_\_\_\_\_ अकरोत्।

ग. राष्ट्रभक्तः तिलकः अधोषयत् यत् वयं \_\_\_\_\_  
गृहीत्वा एव शान्ता भविष्यामः।

घ. तिलकस्य घोषणा हतोत्साहेषु हृदयेषु \_\_\_\_\_ अजनयत्।

ङ. सः ग्रन्थद्वयस्य \_\_\_\_\_ अपि अकरोत्।



7. रचनाभ्यासः

क. अधोलिखितानि पदानि प्रयुज्य लोकमान्यतिलकस्य विषये पञ्चवाक्यानि संस्कृतेन लिखत

देशभक्तः, रत्नगिरिनामके, द्वयोः पत्रयोः, प्रयासैः जन्मसिद्धः,  
स्वराज्यप्राप्तये, कारागारे, ग्रन्थद्वयस्य, पातयिष्यामः, 1920 ख्रिस्ताब्दे

ख. लोकमान्यस्य ..... गतः इति। सम्यक् पठित्वा प्रश्नद्वयं रचयत

योग्यताविस्तारः

क. भावविस्तारः

न विकाराय विश्वस्योपकारायैव निर्मिताः।  
स्फुरत्कारुण्यपीयूष वृष्टयस्तत्त्वदृष्टयः॥

(ज्ञानसार 19.8)

जीवने यस्य जीवन्ति मित्राणीष्टाः सबान्धवाः।  
सफलं जीवितं तस्य आत्मार्थे को न जीवति॥

(चाणक्यराजनीतिशास्त्र 1.24)

स जीवति गुणो यस्य धर्मो यस्य स जीवति।  
गुणधर्मविहीनो यः जीवितं तस्य निष्फलम्॥

(चाणक्यराजनीतिशास्त्रम् 1.23)

स जातो येन जातेन याति वंशः समुन्नतिम्।  
परिवर्तिनि संसारे मृतः को वा न जायते॥

(पञ्चतन्त्रम्)

ख. भाषिकविस्तारः

कर्मधारयसमासः

यदि कस्मिन्पि समस्तपदे पूर्वपदं विशेषणम्, उत्तरपदं न विशेष्यं भवति तत्र कर्मधारयसमासः भवति यथा —

प्रखरबुद्धिः	—	प्रखरा च सा बुद्धिः
सूक्ष्मदृष्टिः	—	सूक्ष्मा च सा दृष्टिः
महापुरुषः	—	महांश्वासौ पुरुषः

यदि च एभिरेव पदैः अन्यपदस्य प्राधान्यम् अभिलक्ष्यते तदा तत्र बहुव्रीहिसमासः भवति। यथा उपर्युक्तपदेषु एव प्रखरबुद्धिः, सूक्ष्मदृष्टिः च एतयोः पदयोः प्रयोगः लोकमान्यतिलकमहाभागेभ्योभवत् अतः विग्रह एवं भविष्यति —

प्रखरा बुद्धिः — प्रखरा बुद्धिः यस्य सः  
 सूक्ष्मदृष्टिः — सूक्ष्मा दृष्टिः यस्य सः  
 महापुरुषदेशः — महान्तः पुरुषाः यस्मिन् सः देशः

इत्थं वयं पश्यामः यत् विग्रहभेदेन एव समासाः स्पष्टरूपेण ज्ञायन्ते। एकस्मिन् एव समस्तपदे विग्रहभेदेन भिन्नः समासः भवितुं शक्नोति।

#### ग. णिच् प्रत्ययप्रयोगः

यत्र कर्ता स्वयं कार्यं न करोति अपितु अन्यं कर्तुं प्रेरयति तत्र क्रियायां णिच्-प्रत्ययः प्रयुज्यते।

- णिच्-प्रत्ययस्य 'अय्' इत्यवशिष्टांशौ धातुना सह प्रयुज्यते।
- अय्-युक्ताः सर्वेऽपि धातवः चुरादिगणीयाः भवन्ति।
- आकारान्तैः धातुभिः सह 'अय्' पूर्व 'प' इति योज्यते।
- णिच्-प्रत्यय-युक्त-धातूनां क्त्वा-ल्यप्-तुमुन्-प्रत्ययान्तरूपाणि अपि चुरादिगणीयधातुवत् चलन्ति।

यथा —

धातुः	+	प्रत्ययः	लट्लकारे	क्त्वा/ल्यप्	तुमुन्
√पत्	+	णिच्	पातयति	पातयित्वा	पातयितुम्
√स्था	+	णिच्	स्थापयति	स्थापयित्वा	स्थापयितुम्
√साध्	+	णिच्	साधयति	साधयित्वा	साधयितुम्
√चुर्	+	णिच्	चोरयति	चोरयित्वा	चोरयितुम्
√जन्	+	णिच्	जनयति	जनयित्वा	जनयितुम्
नि + √वृ	+	णिच्	निवारयति	निवार्य	निवारयितुम्
√भू	+	णिच्	भावयति	भावयित्वा	भावयितुम्
√दा	+	णिच्	दापयति	दापयित्वा	दापयितुम्
√हस्	+	णिच्	हासयति	हासयित्वा	हासयितुम्
√पठ्	+	णिच्	पाठयति	पाठयित्वा	पाठयितुम्

षष्ठः पाठः

## भर्तृहरेः भारती

[सूक्ति-साहित्य में भर्तृहरि का महत्त्वपूर्ण स्थान है। 'वैराग्यशतक', 'शृङ्गारशतक' और 'नीतिशतक' इनके अतीव प्रसिद्ध शतक-काव्य हैं। प्रस्तुत पाठ के पद्य उनके 'नीतिशतक' नामक ग्रंथ से उद्धृत हैं। इनमें जीवनोपयोगी शाश्वत मूल्यों, सज्जनों का स्वभाव, परोपकारियों का व्यवहार, महात्माओं की प्रकृति, उत्तम मित्रों के कर्त्तव्य, सज्जनों की मैत्री, धन का सदुपयोग, उत्तम व्यक्ति की क्रियाशीलता, मनस्वी की जीवनचर्या तथा वक्तृत्व की महिमा जैसे विषयों पर विचार व्यक्त किए गए हैं।]

भवन्ति नम्रास्तरवः फलोदगमैः नवाम्बुभिर्दूरविलम्बिनो घनाः।

अनुद्धताः सत्पुरुषाः समृद्धिभिः स्वभाव एवैष परोपकारिणाम् ॥1॥

विपदि धैर्यमथाभ्युदये क्षमा सदसि वाक्स्पन्दुता युधि विक्रमः।

यशसि चाभिरुचिर्व्यसनं श्रुतौ प्रकृतिसिद्धमिदं हि महात्मनाम् ॥2॥

मनसि वचसि काये पुण्यपीयूषपूर्णास्त्रिभुवनमुपकारश्रेणिभिः प्रीणयन्तः।

परगुणपरमाणून् पर्वतीकृत्य नित्यं निजहृदि विकसन्तः सन्ति सन्तः कियन्तः ॥3॥

पापान्निवारयति योजयते हिताय, गुह्यं निगूहति गुणान् प्रकटीकरोति।

आपदगतं च न जहाति, ददाति काले सन्मित्रलक्षणमिदं प्रवदन्ति सन्तः ॥4॥

आरम्भगुर्वी क्षयिणी क्रमेण लघ्वी पुरा वृद्धिमती च पश्चात्।

दिनस्य पूर्वार्धपरार्ध-भिन्ना छायेव मैत्री खलसज्जनानाम् ॥5॥

केयूराणि न भूषयन्ति पुरुषं हारा न चन्द्रोज्ज्वला  
 न स्नानं न विलेपनं न कुसुमं नालङ्कृता मूर्धजाः।  
 वाण्येका समलङ्करोति पुरुषं या संस्कृता धार्यते  
 क्षीयन्ते खलु भूषणानि सततं वाग्भूषणं भूषणम् ॥ 6 ॥

एके सत्पुरुषाः परार्थघटकाः स्वार्थान्परित्यज्य ये,  
 सामान्यास्तु परार्थमुद्यमभृतः स्वार्थाविरोधेन ये।  
 तेऽभी मानुषराक्षसाः परहितं स्वार्थाय निघ्नन्ति ये  
 ये निघ्नन्ति निरर्थकं परहितं ते केन जानीमहे ॥ 7 ॥

शब्दार्थाः

फलोदगमैः	—	फलानाम् उत्पत्तिभिः	—	फलों के आने से
नवाम्बुभिः	—	नूतनजलैः	—	(वर्षा के) नए जल से
दूरविलम्बिनः	—	नीचैः आगताः	—	नीचे की ओर लटकने वाले
अनुद्धताः	—	विनीताः	—	नम्र, शालीन
अभ्युदये	—	उत्थाने	—	उन्नति होने पर
सदसि	—	सभायाम्	—	सभा में
प्रकृतिसिद्धम्	—	स्वभावेन एव सिद्धम्	—	जन्मजात
पुण्यपीयूषपूर्णाः	—	पुण्यामृतेन सहिताः	—	पुण्य रूपी अमृत से युक्त
प्रीणयन्तः	—	तर्पयन्तः	—	प्रसन्न करते हुए
गुह्यम्	—	गोपनीयम्, रहस्यम्	—	गोपनीय रहस्य
निगूहति	—	गोपयति	—	छिपाता है
जहाति	—	त्यजति	—	छोड़ता है
सन्मित्रलक्षणम्	—	श्रेष्ठमित्रस्य लक्षणम्	—	अच्छे मित्र का लक्षण
आरम्भगुर्वी	—	आरम्भे महती	—	प्रारंभ में बड़ी, अधिक
खलसज्जनानाम्	—	दुष्टानां सत्पुरुषाणां च	—	दुष्टों तथा सज्जनों की
चन्द्रोज्ज्वला	—	चन्द्रवत् शुभ्राः	—	चंद्रमा की तरह उज्ज्वल
मूर्धजाः	—	केशाः	—	बाल

संस्कृता	— परिष्कृता, भूषिता	— शुद्ध, अलङ्कृत
परहितम्	— परेषाम्, (अन्येषाम्) हितं कल्याणम्	— दूसरों के हित को
निरर्थकम्	— निष्प्रयोजनम्	— निरर्थक
निघ्नन्ति	— विनाशयन्ति	— मारते हैं
परित्यज्य	— त्यागं कृत्वा	— छोड़कर, त्याग कर

### अस्माभिः किम् अधीतम्

- परोपकारिणः सज्जनाः वृक्षमेघवत् स्वसम्पन्नतया विनतो भूत्वा सर्वेषां हितं कुर्वन्ति।
- महात्मानः स्वभावतः धैर्यशालिनः, क्षमाशीलाः, वाक्पटवः, पराक्रमिणः, यशसः इच्छुकाश्च भवन्ति।
- संसारे एतादृशाः जनाः विरलाः येषां मनसि, वचसि, शरीरे चाऽपि सर्वेषां कृते शुभेच्छा अस्ति।
- सन्मित्रं सदैव स्वमित्रस्य हितं करोति।
- दुष्टानां मित्रता दिनस्य पूर्वार्धेच्छायेव आरम्भेऽधिका क्रमेण च क्षयिणी भवति परं सज्जनानां मित्रता दिनस्य परार्द्धेच्छायेव प्रारम्भे न्यूना पश्चाच्च वृद्धिमती भवति।
- कस्यापि मनुष्यस्य अलङ्करणं केयूरैः सुशोभितैः हारादिभिः च न भवति। सुसंस्कृता वाणी एव सर्वेषां आभूषणमस्ति।
- सज्जना अन्येषां कल्याणं कर्तुमिच्छन्ति, सामान्यजनाः स्वार्थस्य अवरोधेन उपकारं कुर्वन्ति। मनुष्यरूपेण राक्षसाः स्वार्थाय परेषां हितस्य अपघातं कुर्वन्ति परं ये जनाः परहितं निरर्थकमेव घ्नन्ति तेषां कृते तु शब्दकोषे शब्दस्यैव अभावः प्रतीयते।



अभ्यासः

मौखिकः

1. अधोलिखितानां प्रश्नानाम् उत्तराणि एकेनैव पदेन वदत

- क. तरवः कैः नम्रा भवन्ति?
- ख. सन्त उपकारश्रेणिभिः किं प्रीणयन्ति?
- ग. आपद्गतं मित्रं को न जहाति?
- घ. खलसज्जनानां मैत्री कीदृशी भवति?
- ङ. सततं भूषणं किम्?
- च. महात्मनां प्रकृतिसिद्धगुणेषु वाक्पटुता कुत्र अपेक्षिता?
- छ. समृद्धिभिः केऽनुद्धताः?
- ज. कीदृशी वाणी पुरुषं समलङ्करोति?

लिखितः

1. अधोलिखितानां प्रश्नानाम् उत्तराणि संस्कृतभाषया लिखत

- क. सज्जनानां मैत्री कदा लघ्वी कदा च वृद्धिमती भवति?
- ख. सन्तः कान् पर्वतीकृत्य निजहृदि विकसन्ति?
- ग. पुरुषं का समलङ्करोति?
- घ. परोपकारिणां स्वभावः कीदृशः?
- ङ. सन्मित्रं स्वमित्रं कस्मात् निवारयति?
- च. सत्पुरुषाः कीदृशा भवन्ति?

2. उपयुक्तस्थानं योजयत

- क. अनुद्धताः सत्पुरुषाः समृद्धिभिः
- ख. यशसि चाभिरुचिर्व्यसनं श्रुतौ
- ग. गुह्यं निगूहति गुणान् प्रकटीकरोति
- घ. दिनस्य पूर्वार्धपरार्धभिन्ना
- ङ. केयूराणि न भूषयन्ति पुरुषं
- च. मनसि वचसि काये
- छ. सामान्यास्तु परार्थमुद्यमभृता

स्वार्थाविरोधेन ये।  
 प्रकृतिसिद्धमिदं हि महात्मनाम्।  
 छायेव मैत्री खलसज्जनानाम्।  
 स्वभाव एव एष परोपकारिणाम्।  
 सन्मित्रलक्षणमिवं प्रवदन्ति सन्ताः।  
 हाराः न चन्द्रोज्ज्वलाः।  
 पुण्यपीयूषपूर्णाः।

## 3. रिक्तस्थानपूर्तिद्वारा अन्वयं पूरयत

- क. फलोद्गमैः \_\_\_\_\_ नम्रा भवन्ति। \_\_\_\_\_ घना  
दूरविलम्बिन (भवन्ति)। सत्पुरुषाः \_\_\_\_\_ अनुद्धताः (भवन्ति)।  
स्वभाव एवैष \_\_\_\_\_।
- ख. आरम्भगुर्वी क्रमेण \_\_\_\_\_ पुरा लब्धी \_\_\_\_\_  
च \_\_\_\_\_ दिनस्य \_\_\_\_\_ छाया इव खलसज्जनानां  
\_\_\_\_\_ (भवति)।
- ग. मनसि \_\_\_\_\_ काये पुण्यपीयूषपूर्णाः \_\_\_\_\_  
त्रिभुवनं प्रीणयन्तः \_\_\_\_\_ नित्यं पर्वतीकृत्य \_\_\_\_\_  
विकसन्तः कियन्तः \_\_\_\_\_ सन्ति।

## 4. क. सन्धिं कुरुत

फल + उद्गमैः	=	_____
पर + उपकारिणाम्	=	_____
चन्द्र + उज्ज्वलाः	=	_____

## ख. सन्धिविच्छेदं कुरुत

नम्रास्तरवः	=	_____	+	_____
पूर्णास्त्रिभुवनम्	=	_____	+	_____
सामान्यास्तु	=	_____	+	_____

## ग. संयोगं वियोगं च कुरुत

सिद्धम्	+	इदम्	=	_____
_____	+	_____	=	लक्षणमिदम्
धैर्यम्	+	_____	=	धैर्यमथ
त्रिभुवनम्	+	उपकारश्रेणिभिः	=	_____
परार्थम्	+	उद्यमभूतः	=	_____

## 5. क. श्लोकौ आधृत्य सोपानानि पूरयत

i. प्रकृतिसिद्धमिदं हि महात्मनाम्

यथा — विपदि धैर्यम्

अभ्युदये	
सदसि	
युधि	
यशसि	
श्रुतौ	

ii. सन्मित्र लक्षणमिदम्

यथा — पापात् निवारयति

हिताय	
गुह्यं	
गुणान्	
आपद्गतं च न	
काले	

6. उदाहरणम् अनुसृत्य निर्देशानुसारं पदपरिचयं लिखत

	पदानि	मूलशब्दः	विभक्तिः	वचनम्
यथा —	विपदि	विपद्	सप्तमी	एकवचनम्
	सदसि			
	अभ्युदये			
	श्रुतौ			
	मनसि			
	काये			
	मनसि			
	हृदि			
	युधि			
	यशसि			
यथा —	उद्गमैः	उद्गम	तृतीया विभक्तिः	बहुवचनम्
	अम्बुभिः			
	समृद्धिभिः			
	श्रेणिभिः			



7. अधोलिखितविशेष्यपदैः सह मञ्जूषातः समुचितविशेषणपदानि योजयत  
विशेष्यपदानि विशेषणपदानि

यथा — तरवः	नम्राः
घनाः	_____
सन्तः	_____
सत्पुरुषाः	_____
हाराः	_____
मूर्धजाः	_____
वाणी	_____
वाग्भूषणम्	_____
परार्थघटकाः	_____

प्रीणयन्तः, सततम्, संस्कृता, नम्राः, सत्पुरुषाः  
अनुद्धताः, चन्द्रोज्ज्वलाः, दूरविलम्बिनः, अलङ्कृताः

8. सप्रसङ्गं व्याख्यां कुरुत

- क. क्षीयन्ते खलु भूषणानि सततं वाग्भूषणं भूषणम्।  
ख. अनुद्धताः सत्पुरुषाः समृद्धिभिः।  
ग. दिनस्य पूर्वार्धपरार्धभिन्ना छायेव मैत्री खलसज्जनानाम्।

योग्यताविस्तारः

क. कविपरिचयः

भर्तृहरेः 'शृंगारशतकम्', 'नीतिशतकम्', 'वैराग्यशतकम्' इति शतकत्रयस्य रचयिता। अस्य रचनाकालः 67 ई.पू. सिध्यते। सः एकः योग्यः राजा आसीत् यस्य महिष्याः नाम पिङ्गला आसीत्। तस्य जीवनस्य समस्तपक्षाणां गहनोऽनुभव आसीत्।

ख. ग्रन्थपरिचयः

'नीतिशतकम्' इति कृतिः भर्तृहरेः सर्वश्रेष्ठा रचना। अस्मिन् ग्रन्थे श्लोकसंख्या शतम् अस्ति। एषोऽतीव लोकप्रियः ग्रन्थः। अस्य श्लोकाः प्रसिद्धाः। एषु आचारशिक्षा, नीतिशिक्षा, सज्जनप्रशंसा,

कर्मफलं, विद्यामहिमा, धैर्यम्, परोपकारः, इति विषयाणां उपादेयता वर्णिता। कवेः भाषा सरला, सरसा, सुबोधा चास्ति। विविधैः अलङ्कारैः युक्तानि सर्वाणि पद्यानि गेयानि। परगुणग्राहकाः सज्जनाः विरला एव इति भावोऽधस्तने श्लोके दृश्यताम् —

मनसि वचसि काये पुण्यपीयूषपूर्णा —

स्त्रिभुवनमुपकारश्रेणिभिः प्रीणयन्तः।

परगुणपरमाणून् पर्वतीकृत्य नित्यं

निजहृदि विकसन्तः सन्ति सन्तः कियन्तः॥

ग. भाषिकविस्तारः

**नञ्-तत्पुरुष-समासः**

तत्पुरुषसमासे यदि प्रथमं न इति निपातः स्यात् उत्तरपदं च संज्ञा वा विशेषणं वा स्यात् तदा नञ्-तत्पुरुषः समासः भवति। न यदि स्वरात् पूर्वं भवति तदा अन् इति रूपे परिवर्तते परन्तु यदि व्यञ्जनात् पूर्वं भवति तदा अ इति रूपे परिवर्तते। यथा —

i. न उद्धताः इति अनुद्धताः

न आरोग्यम् इति अनारोग्यम्

न आयुष्यम् इति अनायुष्यम्

न अभ्यासः इति अनभ्यासः

न आगतम् इति अनागतम्

ii. न ब्राह्मणः इति अब्राह्मणः

न सुखम् इति असुखम्

न योग्यम् इति अयोग्यम्

न क्रोधः इति अक्रोधः

न साधुः इति असाधुः

घ. भावविस्तारः

■ अनुभवति हि मूर्ध्ना पादपस्तीव्रमुष्णम्।

शमयति परितपं छायाया संश्रितानाम्॥

(अभिज्ञा.)

■ परोपकारार्थं यो जीवति स जीवति।

(सु.र.भा.)

- परोपकाराय फलन्ति वृक्षाः, परोपकाराय वहन्ति नद्यः।  
परोपकाराय दुहन्ति गावः, परोपकारार्थमिदं शरीरम्॥

(विक्रमचरितम्)

- विभ्रति कायः करुणापराणां परोपकारैर्न तु चन्दनेन।
- सर्वभूतोपकाराच्च किमन्यत्सुकृतं परम्

(कथा)

### वाणी

- अर्थभारवती वाणी भजते कामपि श्रियम्।
- अल्पाक्षरमणीयं यः कथयति निश्चितं स वाग्मी।
- अवसरपठिता वाणी गुणगणरहितापि शोभते पुंसाम्।
- मितं च सारं च वचो हि वाग्मिता।

(सु.र.भा.)

(सु.र.भा.)



सप्तमः पाठः

## सर्वे भद्राणि पश्यन्तु

[प्रस्तुत पाठ 'वेतालपञ्चविंशतिः' नामक कथा संग्रह से लिया गया है जिसमें मनोरञ्जक एवम् आश्चर्यजनक घटनाओं के माध्यम से जीवनमूल्यों का निरूपण किया गया है। इस कथा में जीमूतवाहन अपने पूर्वजों के काल से गृहोद्यान में आरोपित कल्पवृक्ष से सांसारिक द्रव्यों को न माँगकर समस्त संसार के दुःख दूर करने का वरदान माँगता है क्योंकि धन तो पानी की लहर के समान चंचल है, केवल परोपकार ही इस संसार का सर्वोत्कृष्ट तथा चिरस्थायी उपादेय तत्त्व है ॥

अस्ति हिमवान् नाम सर्वरत्नभूमिर्नगेन्द्रः। तस्य सानोरुपरि विभाति कञ्चनपुरं नाम नगरम्। तत्र जीमूतकेतुरिति श्रीमान् विद्याधरपतिः वसति स्म। तस्य गृहोद्याने कुलक्रमागतः कल्पतरुः स्थितः। स राजा जीमूतकेतुः तं कल्पतरुम् आराध्य तत्प्रसादात् च बोधिसत्त्वांशसम्भवं जीमूतवाहनं नाम पुत्रं प्राप्नोत्। स महान् दानवीरः सर्वभूतानुकम्पी च अभवत्। तस्य गुणैः प्रसन्नः स्व-सचिवैश्च प्रेरितः स राजा कालेन सम्प्राप्तयौवनं तं यौवराज्येऽभिषिक्तवान्। यौवराज्ये स्थितः स जीमूतवाहनः कदाचित् हितैषिभिः पितृमन्त्रिभिः उक्तः — “युवराज ! योऽयं सर्वकामदः कल्पतरुः तवोद्याने तिष्ठति स तव सदा पूज्यः। अस्मिन् अनुकूले स्थिते शक्रोऽपि नास्मान् बाधितुं शक्नुयात्” इति।

आकर्ण्यैतत् जीमूतवाहनः अन्तरचिन्तयत् — “अहो बत ! ईदृशममरपादपं प्राप्यापि पूर्वं पुरुषैरस्माकं तादृशं फलं किमपि नासादितं किन्तु केवलं कैश्चिदेव कृपणैः कश्चिदपि अर्थोऽर्थितः। तदहमस्मात् मनोरथमभीष्टं साधयामि” इति।

एवमालोच्य स पितुरन्तिकमागच्छत्। आगत्य च सुखमासीनं पितरमेकान्ते न्यवेदयत् —  
 “तात ! त्वं तु जानासि एव यदस्मिन् संसारसागरे आशरीरमिदं सर्वं धनं  
 वीचिवच्चञ्चलम्। एकः परोपकार एवास्मिन् संसारेऽनश्वरः यो युगान्तपर्यन्तं यशः  
 प्रसूते। तदस्माभिरीदृशः कल्पतरुः किमर्थं रक्ष्यते? यैश्च पूर्व्वरयं ‘मम मम’ इति  
 आग्रहेण रक्षितः, तैरिदानीं कुत्र गतम्? तेषां कस्यायम्? अस्य वा के ते? तस्मात्  
 परोपकारैकफलसिद्धये त्वदाज्ञया इमं कल्पपादपं आराधयामि।

अथ पित्रा ‘तथा’ इति अभ्यनुज्ञातः स जीमूतवाहनः कल्पतरुम् उपगम्य  
 उवाच — “देव ! त्वया अस्मत्पूर्व्वेषाम् अभीष्टाः कामाः पूरिताः, तन्ममैकं कामं पूरय।



यथा पृथ्वीमदरिद्रां पश्यामि, तथा करोतु देवः। भद्रमस्तु ते, ब्रज, स्वस्ति तुभ्यम्,  
 लोकाय अर्थिने त्वं मया दत्तोऽसि” इति। एवंवादिनि जीमूतवाहने त्यक्तस्त्वया  
 एषोऽहं यातोऽस्मि” इति वाक् तस्मात् तरोरुदभूत्। क्षणेन च स कल्पतरुः दिवं  
 समुत्पत्य भुवि तथा वसूनि अवर्षत् यथा न कोऽपि दुर्गत आसीत्। ततस्तस्य  
 जीमूतवाहनस्य सर्वजीवानुकम्पया सर्वत्र यशः प्रथितम्।

## शब्दार्थाः

हिमवान्	—	हिमालयः	—	हिमालय
नगेन्द्रः	—	पर्वतराजः	—	पर्वतों का राजा
सानोः	—	शिखरस्य	—	शिखर के, चोटी के
कुलक्रमागतः	—	कुलक्रमाद् आगतः,	—	कुल-परम्परा से प्राप्त हुआ
		कुलपरम्परया सम्प्राप्तः		
यौवराज्ये	—	युवराजपदे	—	युवराज के पद पर
शक्रः	—	इन्द्रः	—	इन्द्र
अर्थितः	—	याचितः	—	माँगा
अन्तिकम्	—	समीपम्	—	पास में
वीचिवत्	—	तरङ्गवत्	—	तरङ्ग की तरह
अभ्यनुज्ञातः	—	अनुमतः	—	अनुमति पाया हुआ
अर्थिने	—	याचकाय	—	माँगने वाले के लिए, भिखारी के लिए
दिवम्	—	स्वर्गम्	—	स्वर्ग
वसूनि	—	धनानि	—	धन
उपगम्य	—	समीपं गत्वा	—	पास में जाकर
दुर्गतः	—	दुर्गतिम् आपन्नः,	—	पीड़ित, निर्धन
सर्वजीवानुकम्पया	—	सर्वजीवेभ्यः कृपया	—	सभी जीवों के प्रति कृपा से
प्रथितम्	—	प्रसिद्धम्	—	प्रसिद्ध हो गया

## अस्माभिः किम् अधीतम्

- कञ्चनपुरे जीमूतकेतुनामा विद्याधरपतिः वसति स्म।
- तस्य गृहोद्याने कुलक्रमादागतः कल्पतरुः आसीत्।
- तरोः कृपया सः जीमूतवाहनं नाम पुत्रं प्राप्नोत्।
- एकदा स पितुः समीपं गत्वा परोपकारार्थं कल्पतरोः आराधनाय इच्छां प्रकटितवान्।

- पितुः अनुज्ञया सः कल्पतरवे न्यवेदयत् “माम एकाम् इच्छां पूरय। सर्वा पृथिवी एव अदरिद्रा स्यात् अतोऽहं भवन्तं लोककल्याणाय” ददामि इति।
- तस्मिन् क्षणे एव सः कल्पतरुः उत्पत्य पृथिव्यां धनानि अवर्षत्।
- धनवृष्ट्या कोऽपि दरिद्रः न अतिष्ठत्।
- सर्वजीवानुकम्पया जीमूतवाहनस्य यशः सर्वत्र प्रासरत्।



अभ्यासः

## मौखिकः

## 1. अधोलिखितानां प्रश्नानाम् उत्तराणि एकनैव पदेन वदत

क. सर्वस्वभूमिर्नग्रेन्द्रस्य किं नाम आसीत्?

ख. तत्र कः विद्याधरपतिः वसति स्म?

ग. राजा जीमूतकेतुः कम् आराध्य पुत्रं प्राप्नोत्?

घ. जीमूतवाहनस्य उद्याने स्थितस्य कल्पतरोः किं वैशिष्ट्यम् आसीत्?

ङ. संसारसागरे धनं कीदृक् चञ्चलम्?

च. जीमूतवाहनः कल्पतरुं पृथ्वीं कीदृशीं कर्तुं याचते?

छ. कल्पतरुः दिवं समुत्पत्य किम् अवर्षत्?

ज. जीमूतवाहनस्य यशः सर्वत्र कथं प्रथितम्?

## लिखितः

## 1. अधोलिखितानां प्रश्नानां उत्तराणि संस्कृतभाषया लिखत

क. हिमवतः सानोरुपरि किं नाम नगरं विभाति स्म?

ख. जीमूतवाहनः कीदृशः युवराज आसीत्?

ग. राजा जीमूतकेतुः कैः प्रेरितः जीमूतवाहनं यौवराज्येऽभिषिक्तवान्?

घ. अमरपादपं प्राप्य कैः अर्थोऽर्थितः?

ङ. जीमूतवाहनः पितुराज्ञया कल्पपादपं किमर्थम् आराधयत्?

च. कल्पतरुः भुवि किमर्थं वसूनि अवर्षत्?

## 2. अधोलिखितवाक्येषु रेखाङ्कितसर्वनामपदानि कस्मै प्रयुक्तानि

क. तस्य सानोरुपरि विभाति कञ्चनपुरं नाम नगरम्। ———।

ख. राजा सम्राट्पयौवनं तं यौवराज्ये अभिषिक्तवान्। ———।

ग. अयं तव सदा पूज्यः। ———।

घ. तात! त्वं तु जानासि यत् धनं वीचिवत् चञ्चलम्। ———।

ङ. भट्टमरत ते। ———।



## 3. उदाहरणम् अनुसृत्य प्रकृति-प्रत्यय-विभागं कुरुत

क. यथा - अभ्यनुज्ञातः	-	अभि + अनु + √ज्ञा + क्त
यातः	-	√या + क्त
अभीष्टम्	-	_____
आसादितम्	-	+ √सद् + णिच् +
गतः	-	_____
उक्तः	-	√ ब्रू + √ वच् +
स्थितः	-	_____
अर्थितः	-	_____
पूरिताः	-	_____
दत्तः	-	_____
त्यक्तः	-	_____
प्रेरितः	-	_____
प्रसन्नः	-	प्र + √सद्
रक्षितः	-	_____

ख. यथा - समुत्पत्य	-	सम् + उत् + पत् + त्यप्
आलोच्य	-	आ + √लोच् + _____
आगत्य	-	_____
आराध्य	-	_____
आकर्ण्य	-	_____
प्राप्य	-	_____

## 4. उदाहरणम् अनुसृत्य अधोलिखितानां विग्रहपदानां समस्तपदानिकुरुत

विग्रहपदानि		समस्तपदानि
विद्याधराणां	+	पतिः
गृहस्य	+	उद्याने
		विद्याधरपतिः
		_____

नगानाम्	+	इन्द्रः	_____
परेषाम्	+	उपकारः	_____
पितुः	+	मन्त्रिभिः	_____
जीवानाम्	+	अनुकम्पया	_____

ग. संयोगं/विच्छेदं वा कुरुत

यथा - सुखम्	+	आसीनम्	=	सुखमासीनम्
_____	+	_____	=	शरीरमिदम्
किम्	+	अर्थम्	=	_____
_____	+	_____	=	ईदृशममरपादपम्
पृथ्वीम्	+	अदरिद्राम्	=	_____

5. पाठम् आधृत्य अधोलिखितपदेभ्यः प्राक् उपयुक्तविशेषणपदानि लिखत

यथा — सर्वकामदः कल्पतरुः

_____	फलम्
_____	धनम्
_____	विद्याधरपतिः
_____	कामाः
_____	पुरुषैः
_____	पितृमन्त्रिभिः

6. अधोलिखितानि वाक्यानि कः कं कथयति

क. युवराज! कल्पतरौ अनुकूले स्थिते शक्रोऽपि नास्मान् बाधितुं शक्नुयात्।	कः	कम्
ख. तात! आशरीरमिदं सर्वं धनं वीचिवत् चञ्चलम्।	_____	_____
ग. देव! त्वया अस्मत्पूर्वेषामभीष्टाः कामाः पूरिताः।	_____	_____
घ. त्यक्तस्त्वया एषोऽहं यातोऽस्मि।	_____	_____

ङ 'तथा' इति।

च. एकः परोपकार एव अस्मिन् संसारेऽनश्वरः।

ii सप्रसङ्गं व्याख्यां कुरुत

क. ईदृशममरपादपं प्राप्यापि पूर्वैः पुरुषैरस्माकं तादृशं फलं किमपि नासादितं किन्तु केवलं कौश्चिदेव कृपणैस्तैः कश्चिदपि अर्थोऽर्थितः।

7. क्षणेन च.....दुर्गत आसीत् इति । सम्यक् पठित्वा प्रश्नद्वयं रचयत —

योग्यताविस्तारः

क. ग्रन्थपरिचयः

'वेतालपञ्चविंशतिका', पञ्चविंशतिकथानां सङ्ग्रहोऽस्ति। अस्य ग्रन्थस्य संस्करणद्वयं प्राप्यते। शिवदासकृतः ग्रन्थः गद्यपद्यमयोऽस्ति परं जम्भलवत्कृतः गद्यमयः केवलम्। अत्र वर्णितं यत् राजा त्रिविक्रमसेनाय प्रतिवर्षम् एकः भिक्षुकः रत्नयुक्तं फलमेकं ददाति इति। राजा तस्य भिक्षुकस्य सहायतायै वेतालाधिष्ठितम् एकं शवम् आनेतुं श्मशानं गच्छति। वेतालः मौनं स्थित्वा कथां श्रोतुं राजानम् आदिशति। मार्गे सः वेतालः राज्ञः विनोदार्थं कथामेकां श्रावयति अन्ते तस्य उत्तरं च पृच्छति। राजा शुद्धम् उत्तरं ददाति। स वेतालः पुनः श्मशानं प्राप्नोति। इत्थं पञ्चविंशतिवारम् एषा एव घटना आवृत्ता भवति। वेतालः च राजानं पञ्चविंशतिकथाः श्रावयति। अतीवरोचकाः भावप्रधानाः विवेकपरीक्षकाः च एताः कथाः। भारतस्य अधिकांशभाषासु अस्य ग्रन्थस्य अनुवादः जातः। अनेन अस्य ख्यातिः लोकप्रियता च सूच्यते।

ख. भाषिकविस्तारः

क्त-क्तवतु-प्रयोगः

क्त — प्रत्ययस्य प्रयोगः कर्मवाच्ये भवति।

क्तवतु — प्रत्ययस्य प्रयोगश्च कर्तृवाच्ये भवति।

क्त प्रत्ययः — यथा

सः जीमूतवाहनः हितैषिभिः मन्त्रिभिः उक्तः।

कृपणैः कश्चिदपि अर्थः अर्थितः।

त्वया अस्मत्कामाः पूरिताः।

तस्य यशः प्रथितम्।

क्तवतुप्रयोगः — यथा

सः पुत्रं यौवराज्यपदेऽभिषिक्तवान्।  
 एतदाकर्ण्य जीमूतवाहनः चिन्तितवान्।  
 सः सुखासीनं पितरं निवेदितवान्।  
 सः जीमूतवाहनः कल्पतरुम् उक्तवान्।

ग. 'सर्वे भद्राणि पश्यन्तु' इति विषयकाः कामनाः

- सर्वे भवन्तु सुखिनः सर्वे सन्तु निरामयाः।  
 सर्वे भद्राणि पश्यन्तु मा कश्चिद् दुःखभाग्यभवेत्॥
- सर्वस्तर्तु दुर्गाणि, सर्वो भद्राणि पश्यतु।  
 सर्वः कामानवाप्नोतु, सर्वः सर्वत्र नन्दतु॥
- राष्ट्रं नः स्यात् समृद्धं सकलगुणगणैर्भूषिताः स्युः युवानः।  
 नेतारो धर्ममुख्या नयविनयनतां शासतां भूमिभागम्॥
- अद्रोहः सर्वभूतेषु कर्मणा मनसा गिरा।  
 अनुग्रहश्च दानं च शीलमेतत् प्रशस्यते (महा.)
- आत्मवत् सर्वभूतेषु यः पश्यति सः पण्डितः।

अष्टमः पाठः

## श्रीकृष्णस्य दौत्यम्

[यह पाठ महान् नाटककार भास द्वारा रचित 'दूतवाक्यम्' नामक नाटक से संकलित किया गया है। बारह वर्ष का बनवास तथा एक वर्ष का अज्ञातवास समाप्त होने पर श्रीकृष्ण दुर्योधन के पास पाण्डवों का संदेश लेकर जाते हैं। दुर्योधन की सभा में दूत श्रीकृष्ण का अपमान होता है, तथापि वे उसकी उपेक्षा कर पैतृकसंपत्ति का बँटवारा करने के लिए पाण्डवों का संदेश देते हैं, जिसे सुनकर क्रोधाविष्ट दुर्योधन पाण्डवों पर आरोप लगाता हुआ उन्हें युद्ध के बिना सुई की नोक जितना भाग भी देना स्वीकार नहीं करता। “अपने हिस्से का राज्य न पाने पर पाण्डव समुद्र तक विस्तृत पृथ्वी का हरण कर लेंगे” कहकर श्रीकृष्ण वहाँ से लौटने लगते हैं तभी दुर्योधन उन्हें बाँधने का आदेश देता है। श्रीकृष्ण अपना विराट रूप दिखाते हैं, जिससे 'स्वयं न बाँधकर वे सभी सभासदों को बाँध देते हैं। अभिमानी दुर्योधन उनके लिए जम्भक, मायावी, कपटी आदि शब्दों का प्रयोग कर अपने उद्दंड स्वभाव का परिचय देता है।]

(ततः प्रविशति काञ्चुकीयः)

काञ्चुकीयः : जयतु महाराजः। एष खलु पाण्डवस्कन्धावाराद दौत्येनागतः पुरुषोत्तमो नारायणः।

दुर्योधनः : मा तावद्, भो बादरायण ! किं किं कंसभृत्यो दामोदरस्तव पुरुषोत्तमः? सः गोपालकस्तव पुरुषोत्तमः? अहो पार्थिवासन्नमाश्रितस्य भृत्यजनस्य समुदाचारः। सगर्वं खत्वस्य वचनम्। आः अपध्वंस !

- काञ्चुकीयः : प्रसीदतु महाराजः। सम्भ्रमेण समुदाचारो विस्मृतः।  
(पादयोः पतति)
- दुर्योधनः : सम्भ्रान्त इति? आ मनुष्याणामस्त्येव सम्भ्रमः।  
उत्तिष्ठ उत्तिष्ठ।
- काञ्चुकीयः : अनुगृहीतोऽस्मि।
- दुर्योधनः : इदानीं प्रसन्नोऽस्मि। क एष दूतः प्राप्तः।
- काञ्चुकीयः : दूतः प्राप्तः केशवः।
- दुर्योधनः : केशव इति? एवमेष्टव्यम् । अयमेव समुदाचारः। भो भो !  
दौत्येनागतस्य केशवस्य किं युक्तम्? किमाहुर्भवन्तः?  
अर्घ्यप्रदानेन पूजयितव्यः केशव इति न मे रोचते। योऽस्य  
केशवस्य कृते प्रत्युत्थास्यति तमहं दण्डयिष्यामि। बादरायण,  
प्रवेशय अधुना तं दूतम्।
- काञ्चुकीयः : यदाज्ञापयति महाराजः।  
(ततः प्रविशति वासुदेवः काञ्चुकीयश्च)
- दुर्योधनः : भो दूत !  
धर्मात्मजो वायुसुतश्च भीमो —  
भ्रातार्जुनो मे त्रिदशेन्द्रसूनुः।  
यमौ च तावद्विश्वसुतौ विनीतौ,  
सर्वे सभृत्याः कुशलोपपन्ताः॥
- वासुदेवः : सदृशमेतद् गान्धारीपुत्रस्य । अथ किम् अथ किम्? कुशलिनः  
सर्वे भवतो राज्ये शरीरे बाह्याभ्यन्तरे च कुशलमनामयं च  
पृष्ट्वा विज्ञापयन्ति युधिष्ठिरादयः पाण्डवाः —  
अनुभूतं महददुःखं सम्पूर्णः समयः स च।  
अस्माकमपि धर्म्यं यद् दायार्हं तद् विभज्यताम्॥
- दुर्योधनः : कथं कथं दायार्हमिति? देवात्मजास्ते नैवार्हन्ति दायार्हम्।



- वासुदेवः : भो राजन्, मा मैवम्। एवं परस्परविरोधस्य विवर्धनेन कुरुकुलं  
शीघ्रं नामशेषं भविष्यति। तस्मात् रोषमपकृष्य भवान् तदेव  
कर्तुमर्हति यद् युधिष्ठिरप्रमुखाः प्रणयात् त्वां कथयन्ति।
- दुर्योधनः : देवात्मजैर्मनुष्याणां कथं वा बन्धुता भवेत्  
पिष्टपेषणमेतावत् पर्याप्तं छिद्यतां कथा॥
- वासुदेवः : भो सुयोधन ! किं न जानीषे पाण्डवानां पराक्रमम्? श्रूयताम् —  
दातुमर्हसि मद्वाक्याद् राज्यार्धं धृतराष्ट्रज।  
अन्यथा सागरान्तां गां हरिष्यन्ति हि पाण्डवाः॥
- दुर्योधनः : कथं कथम् ! हरिष्यन्ति हि पाण्डवाः ! भो परुषवचनदक्ष !  
अभाष्यस्त्वम्। अहं त्वद्वचोभिः तृणमपि न दास्ये।
- वासुदेवः : भो सुयोधन ! ननु क्षिपसि माम्? गच्छामि तावत्।
- दुर्योधनः : कथं यास्यति किल केशव? भो दुःशासनादयः ! बध्यतां  
केशवः।

वासुदेवः : कथं बद्धुकामो मां किल सुयोधनः? भवतु, सुयोधनस्य सामर्थ्यं पश्यामि।

(विश्वरूपमास्थितः)

दुर्योधनः : भो दूत ! त्वं देवमायाः सृजसि? नरपतिगणमध्ये अद्य त्वमवश्यमेव बध्यसे। आः तिष्ठेदानीम् ! कथं न दृष्टः केशवः? अयं केशवः। अहो ह्रस्वत्वं केशवस्य ! आः तिष्ठेदानीम्। कथं न दृष्टः केशवः? कथं न दृष्टः केशवः? अयं केशवः, अयं केशवः, सर्वत्र मन्त्रशालायां केशवा भवन्ति। किमिदानीं करिष्ये? भवतु, दृष्टम्। भो भो राजानः। एकेनैकः केशवो बध्यताम्। कथं स्वयमेव पार्श्वैर्बद्धाः पतन्ति राजानः? साधु भो जम्भक ! साधु !

शब्दार्थाः

दौत्यम्	— दूतस्य कार्यम्	— दूत का कार्य
स्कन्धावारात्	— शिविरात्	— छावनी से
दामोदरः	— दाम उदरे यस्य सः	— श्रीकृष्ण
गोपालकः	— श्रीकृष्णः गोपः	— गौओं को पालने (चराने) वाला
पार्थिवाः	— राजानः	— राजा
आसन्नम्	— निकटम्	— पास
समुदाचारः	— शिष्टाचारः	— शिष्टाचार
आः अपध्वंस	— निन्दाः	— नीच
प्रसीदतु	— प्रसन्नः भवतु	— प्रसन्न होइए
रामभ्रमेण	— आकुलतया	— हड़बड़ी से
अनुगृहीतः	— उपकृतः	— उपकृत
अर्घ्यप्रदानेन	— अर्घ्यरूपेण जलदानेन	— अर्घ्य का जल देने से
प्रत्युत्थास्यति	— स्वागताय उत्थितः	— स्वागत के लिए
	भविष्यति	— उठकर खड़ा होगा
धर्मात्मजः	— धर्मपुत्रः युधिष्ठिरः	— युधिष्ठिर



वायुसुतः	—	वायुपुत्रः भीमः	—	वायु का पुत्र, भीम
त्रिदशेन्द्रसूनुः	—	इन्द्रपुत्रः अर्जुनः	—	इन्द्र का पुत्र, अर्जुन
अनामयः	—	आरोग्य	—	नीरोगता
विज्ञापयन्ति	—	निवेदयन्ति	—	निवेदन करते हैं
समयः	—	सन्धिः	—	समझौता
दायाद्व्यम्	—	पैतृकसम्पत्तिम्	—	पैतृकसंपत्ति को
देवात्मजाः	—	देवपुत्राः	—	देवपुत्र
नैवार्हन्ति	—	योग्याः नैव सन्ति	—	योग्य (समर्थ) नहीं है
रोषम्	—	क्रोधम्	—	क्रोध को
अपकृष्य	—	दूरीकृत्य	—	त्यागकर
युधिष्ठिरप्रमुखाः	—	युधिष्ठिरादयः	—	युधिष्ठिर आदि
पिष्टपेषणम्	—	पिष्टस्य वस्तुनः	—	बार-बार कहना
		पेषणम्, पुनरुक्तिम्		
गाम्	—	पृथ्वीम्	—	पृथ्वी को
धृतराष्ट्रज	—	दुर्योधन	—	दुर्योधन
हस्यत्वम्	—	लघुत्वम्	—	लघुता को
जम्भक !	—	कपटिन्, मायाविन्	—	हे कपटी !

### अस्माभिः किम् अधीतम् ?

- दुर्योधनसभायां श्रीकृष्णः दूतरूपेण प्रविशति।
- सः पाण्डवानां दायाद्व्यविभाजनविषयकं सन्देशं श्रावयति।
- दुर्योधनः व्यङ्ग्यात्मकभाषया कृष्णं “परुषवचनदक्ष” इति सम्बोध्य “तृणमपि न दास्यामि” इति घोषयति।
- अनया घोषणया युद्धस्तु निश्चितः एव इति मत्वा कृष्णः गन्तुम् इच्छति। परं दुर्योधनः कृष्णं बद्धमादिशति।
- कृष्णः स्वीयं विश्वरूपं प्रकटयति। अन्ते च तस्य अनेकानि रूपाणि भवन्ति।
- कृष्णं बद्धम् असमर्थो दुर्योधनः विचलितो जायते। कृष्णं बद्धुकामाः च सर्वे राजानः स्वयमेव पार्श्वैर्बद्धाः पतन्ति।
- दुर्योधनोऽपि कृष्णस्य मायया सुतरां लज्जितो भवति।

## अभ्यासः

## मौखिकः

## 1. प्रश्नानाम् उत्तराणि एकैनैव पदेन वदत

- क. पुरुषोत्तमो नारायणः दौत्येन कुतः आगतः?  
 ख. 'गान्धारी' कस्य माता आसीत्?  
 ग. 'धर्मात्मजः' इति पदं कस्मै प्रयुक्तम्?  
 घ. पाण्डवाः कस्य विभाजनम् इच्छन्ति?  
 ङ. सागरान्तां गां के हरिष्यन्ति?

## 2. कः कं वदति इति वदत

	कः	कम्
यथा — जयतु महाराजः	काञ्चुकीयः	दुर्योधनम्
क. अयमेव समुदाचारः	_____	_____
ख. दूतः प्राप्तः केशवः	_____	_____
ग. सदृशमेतत् गान्धारीपुत्रस्य	_____	_____
घ. कुरुकुलं शीघ्रं नामशेषं भविष्यति	_____	_____
ङ. अहं त्वद्वचोभिः तृणमपि न दास्ये	_____	_____

## लिखितः

## 1. अधोलिखितवाक्येषु रेखाङ्कितपदानां स्थाने पाठे प्रयुक्तान् शब्दान् लिखत

- यथा — एष खलु दूतकार्येण आगतः पुरुषोत्तमो नारायणः (दौत्येन)  
 क. अहो नृपसमीपमाश्रितस्य भृत्यजनस्य समुदाचारः। ( )  
 ख. अनेन प्रकारेण एव वक्तव्यम् अयमेव समुदाचारः ( )

- ग. तस्मात् क्रोधं दूरीकृत्य भवान् तदेव कर्तुमर्हति यत् युधिष्ठिर —  
 प्रमुखाः प्रणयात् त्वां कथयन्ति। ( )
- घ. नृपाणां समूहमध्येऽद्य त्वमवश्यमेव बध्यसे। ( )
- ङ. कथं मां बद्धमना सुयोधनः। ( )

2. संस्कृतभाषया उत्तराणि लिखत

- क. वासुदेवः दुर्योधनस्य सभां किमर्थं गतवान्?
- ख. काञ्चुकीयेन केन कारणेन समुदाचारो विस्मृतः?
- ग. पाण्डवाः वासुदेवेन दुर्योधनं किं विज्ञापयन्ति?
- घ. केशवः दुर्योधनं पाण्डवेभ्यः किं दातुम् अकथयत्?
- ङ. दुर्योधनः दुःशासनं किमादिशति?

3. तत्पदं रेखाङ्कितं कुरुत

- यत्र सम्बोधनं नास्ति —  
 भो बादशायण ! भो सुयोधन ! भो परुषवचनदक्ष ! केशव इति
- यत्र षष्ठी विभक्तिः नास्ति —  
 रोषमपकृष्य, परस्परविरोधस्य, भृत्यजनस्य, केशवस्य
- यत्र, यत् — प्रत्ययो नास्ति —  
 अभाष्यः, धर्म्यम्, पूज्यम्, दायादम्।

4. सन्धि/सन्धिविच्छेदं लिखत

क. यथा — अनुगृहीतः	+	अस्मि	=	अनुगृहीतोऽस्मि
	+		=	प्रसन्नोऽस्मि
यः	+	अस्य	=	
ख. यथा — न	+	एव	=	नैव
मा	+	एवम्	=	
	+		=	एकेनैकः
ग. यथा — गोपालकः	+	तव	=	गोपालकस्तव

देवात्मजाः	+	ते	=	_____
	+	_____	=	अभाष्यस्त्वम्
घ. यथा - पार्थिव	+	आसन्नम्	=	पार्थिवासन्नम्
देव	+	आत्मजाः	=	_____
	+	_____	=	दौत्येनागतः
ङ. यथा - दुः	+	योधनः	=	दुर्योधनः
पाशैः	+	बद्धाः	=	_____
	+	_____	=	आहुर्मवन्तः

### 5. घटनाक्रमानुसारं लिखत

- क. काञ्चुकीयः वासुदेवं सुयोधनस्य सभां प्रवेशयति।
- ख. सुयोधनः काञ्चुकीयाय कुपितो भूत्वा तं सभायाः निर्गन्तुं कथयति।
- ग. वासुदेवः सभां प्रविश्य सुयोधनस्य कुशलं पृष्ट्वा पाण्डवानां सन्देशं श्रावयति।
- घ. काञ्चुकीयः सुयोधनं दौत्येन पुरुषोत्तमस्य वासुदेवस्य आगमनं ज्ञापयति।
- ङ. काञ्चुकीयः क्षमायाचनां कृत्वा केशवस्य आगमनविषये सूचयति।
- च. सुयोधनः वासुदेवस्य वचनं पिष्टपेषणमिव मन्यते।
- छ. वासुदेवः पाण्डवानां सन्देशं श्रावयित्वा सुयोधनं दयाघदानार्थं प्रेरयति।
- ज. सुयोधनः वासुदेवं बद्धुं सर्वान् राज्ञः आदिशति।
- झ. वासुदेवं बद्धुकामाः सर्वे राजानः पाशैर्बद्धाः पतन्ति।
- ञ. वासुदेवः विश्वरूपम् आस्थितः भवति।

### 6. अधोलिखितेषु वाक्येषु क्त-प्रत्ययस्य यथोचितं प्रयोगं कुरुत

- i. यात्रामार्गे त्वया किं किं \_\_\_\_\_ (दृश् + क्त)
- ii. तव वार्षिकी परीक्षा \_\_\_\_\_ अस्ति। (आ + सद् + क्त)
- iii. शनैः शनैः चलता अपि कच्छपेन गन्तव्यं \_\_\_\_\_। (प्र + आप् + क्त)
- iv. प्रतियोगितायां प्राप्ताविजयी छात्रौ \_\_\_\_\_ स्तः। (प्र + सद् + क्त)
- v. छायावृक्षम् \_\_\_\_\_ पथिकं मार्गं पृच्छ। (आ + श्रि + क्त)

- vi. तव अनेन उपकारेण अहम् \_\_\_\_\_ अस्मि।  
 (अनु + ग्रह् + क्त)  
 vii. \_\_\_\_\_ तस्य तर्कः। (उप + पद् + क्त)  
 viii. गर्दभाः कुत्र \_\_\_\_\_ सन्ति? (बन्ध् + क्त)  
 ix. तेन जीवने बहूनि कष्टानि \_\_\_\_\_। (अनु + भू + क्त)  
 x. सुयोग्येन महेशेन तु धातुरूपाणि न \_\_\_\_\_  
 (वि + स्मृ + क्त)

7. कुशलिनः ..... पाण्डवाः इति। सम्यक् पठित्वा प्रश्नद्वयं रचयत -

योग्यताविस्तारः

क. कविपरिचयः

भासः संस्कृतभाषायाः श्रेष्ठो रूपककारोऽस्ति। सः त्रावणकोरनिवासी दाक्षिणात्य आसीत्। तेन त्रयोदशरूपकाणि लिखितानि येषां गवेषणा 1909 ख्रिस्तीये संवत्सरे महामहोपाध्यायेन टी-गणपति-शास्त्रिणा कृता। भासस्य स्थितिकालः 300 ई.पू. मन्यते विद्वद्भिः। दूतवाक्यम्, कर्णभारम्, दूतघटोत्कचम्, उरुमङ्गम्, मध्यमव्यायोगः, पञ्चरात्रम्, अभिषेकः, बालचरितम्, अविमारकम्, प्रतिमानाटकम्, प्रतिज्ञायौगन्धरायणम्, स्वप्नवासवदत्तम्, चारुदत्तम् चेति तस्य त्रयोदश रूपकाणि। सूक्तिमुक्तावल्यां राजशेखरो भासस्य स्वप्नवासवदत्तं प्रशंसन् कथयति -

भासनाटकचक्रेऽपि चोक्तैः क्षिप्ते परीक्षितुम्।

स्वप्नवासवदत्तस्य दाहकोऽभून्न पावकः॥

ख. रूपकपरिचयः

‘दूतवाक्यं’ नाम रूपकमेकाङ्कम् अस्ति। पाण्डवाः श्रीकृष्णं दूतकर्मणि नियुज्य दुर्योधनसभायां सन्धिप्रस्तावाय प्रेषयन्ति। श्रीकृष्णो यदा कौरवाणां समक्षं पाण्डवैभ्योऽर्धराज्यदानप्रस्तावं स्थापयति तदा अभिमानी, दम्भी च दुर्योधनः तं न स्वीकरोति युद्धसङ्केतं च ददाति। सः सभायां श्रीकृष्णस्य अपमानं कृत्वा दुःसाहसं प्रदर्शयति, तं बद्धुं च प्रयतते परम् असफलो जायते।

ग. भाषिकविस्तारः

ष्यञ् प्रत्ययः

ष्यञ् प्रत्ययस्य प्रयोगः भाव कर्मणोः भवति। प्रत्ययस्य 'य' भाग एव अवशिष्यते।

यथा —

दौत्यम्	—	दूत + ष्यञ्	(दूतस्य कर्म)
औदार्यम्	—	उदार + ष्यञ्	(उदारस्य भावः)
शौर्यम्	—	शूर + ष्यञ्	(शूरस्य कर्म भावो वा)
सौख्यम्	—	सुख + ष्यञ्	(सुखस्य भावः)
चौर्यम्	—	चोर + ष्यञ्	(चोरस्य कर्म)

‘काम’ शब्दस्य प्रयोगविशेषः

समासे ‘काम’ इति शब्दे परे सति तुमुन् — प्रत्ययस्य मकारस्य लोपो भवति।

यथा — बद्धकामः	—	बद्धं कामः यस्य सः	—	बन्धनस्य इच्छुकः
पठितुकामः	—	पठितुं कामः यस्य सः	—	पठनस्य इच्छुकः
द्रष्टुकामः	—	द्रष्टुं कामः यस्य सः	—	दर्शनस्य इच्छुकः
गन्तुकामः	—	गन्तुं कामः यस्य सः	—	गमनस्य इच्छुकः
धावितुकामः	—	धावितुं कामः यस्य सः	—	धावनस्य इच्छुकः
चलितुकामः	—	चलितुं कामः यस्य सः	—	चलनस्य इच्छुकः

स्त्रीलिङ्गे च टाप् (आ) प्रत्ययस्य योगेन —

बद्धकामा, पठितुकामा, गन्तुकामा, धावितुकामा, चलितुकामा इत्यादयः शब्दाः निर्मीयन्ते।

यत्-प्रत्ययः योग्यः इत्यर्थस्य बोधको भवति —

अभाष्यः	—	भाषितुं योग्यो भाष्यः, न भाष्यः अभाष्यः
सेव्यः	—	सेवितुं योग्यः
खाद्यः	—	खादितुं योग्यः
पेयः	—	पातुं योग्यः
दृश्यः	—	द्रष्टुं योग्यः

घ. संस्कृते न्यायाः

केषाञ्चित् न्यायानां स्पष्टीकरणम् —

- पिष्टपेषणन्यायः — पुनरुक्तिदोषः। कृतं कार्यं पौनःपुन्येन कृत्वा व्यर्थमेव समययापनम्; एकस्यैव भावस्य पौनःपुन्येन अभिव्यक्तिर्वा।
- स्थालीपुलाकन्यायः — एकेनैव पदार्थेन समुदायस्य बोधः। स्थालीपुलाके एकेनैव तण्डुलेन सर्वेऽपि तण्डुलाः पक्वा इति अनुमीयते तथैव एकेनैव पदार्थेन सकलस्यापि समूहस्य अनुमानमनेन न्यायेन क्रियते।
- देहलीदीपकन्यायः — यथा देहल्यां स्थापितेन दीपकेन गृहस्यान्तर्बहिःश्च द्वयोरपि स्थानयोः प्रकाशो जायते तथैव एकेनैव साधनेन एकाधिकप्रयोजनानां साध्यानां कार्याणां वा सिद्धिरनेन न्यायेन क्रियते।

नवमः पाठः

## गीतायाः संदेशः

[प्रस्तुत पाठ 'महाभारत' के महत्वपूर्ण अंश 'श्रीमद्भगवद्गीता' से संकलित है। इसमें भगवान् श्रीकृष्ण मोहग्रस्त एवं किंकर्तव्यविमूढ़ अर्जुन को समस्त दुःखों के



विनाश का उपाय कहते हुए समत्वभाव स्थिरमत्तित्व, बाङ्मय तप तथा कर्तव्यभावपूर्वक प्रदत्त सात्त्विक दान का उपदेश देते हैं। वे उसे छेद, दाह, क्लेदन, शोषण आदि धर्मों से रहित आत्मा के स्वरूप और समत्वभावनापूर्वक कर्तव्य पालन का बोध कराते हैं।]

उद्धरेदात्मनात्मानं नात्मानमवसादयेत्।

आत्मैव ह्यात्मनो बन्धुरात्मैव रिपुरात्मनः ॥ १ ॥

युक्ताहारविहारस्य युक्तचेष्टस्य कर्मसु।

युक्तस्वप्नावबोधस्य योगो भवति दुःखहा ॥ २ ॥



तुल्यनिन्दास्तुतिर्मोनी सन्तुष्टो येन केनचित्।  
 अनिकेतः स्थिरमतिर्भक्तिमान्मे प्रियो नरः ॥ 3 ॥  
 तेजः क्षमा धृतिः शौचमद्रोहो नातिमानिता।  
 भवन्ति सम्पदं दैवीमभिजातस्य भारत ॥ 4 ॥  
 अनुद्वेगकरं वाक्यं सत्यं प्रियहितं च यत्।  
 स्वाध्यायाभ्यासनं चैव वाङ्मयं तप उच्यते ॥ 5 ॥  
 दातव्यमिति यद् दानं दीयतेऽनुपकारणे।  
 देशे काले च पात्रे च तद् दानं सात्त्विकं स्मृतम् ॥ 6 ॥  
 नैनं छिन्दन्ति शस्त्राणि नैनं दहति पावकः।  
 न चैनं क्लेदयन्त्यापो न शोषयति मारुतः ॥ 7 ॥  
 सुखदुःखे समे कृत्वा लाभालाभौ जयाजयौ।  
 ततो युद्धाय युज्यस्व नैवं पापमवाप्स्यसि ॥ 8 ॥  
 कार्यमित्येव यत्कर्म नियतं क्रियतेऽर्जुन।  
 सङ्गत्त्यक्त्वा फलं चैव स त्यागः सात्त्विको मतः ॥ 9 ॥

### शब्दार्थाः

उद्धरेत्	—	उद्धारं कुर्यात्	—	उद्धार करें
आत्मना	—	स्वयमेव	—	स्वयम् ही
अवसादयेत्	—	दुःखं प्रापयेत्	—	दुःख प्रदान करे
युक्ताहारिविहारस्य	—	यः समुचितम् आहारं विहारं च करोति तस्य	—	जो उचित आहार तथा विहार करता है
युक्तचेष्टस्य	—	सम्यक् क्रियस्य	—	उचित क्रिया करने वाला
दुःखहा	—	दुःखनाशकः	—	दुःखों को नष्ट करनेवाला
अनिकेतः	—	वासस्थानरिहतः	—	बेघर
तुल्यनिन्दास्तुतिः	—	निन्दाप्रशंसयोः समभावयुक्तः	—	निन्दा एवं स्तुति में समभाव रखनेवाला

स्थिरमतिः	—	स्थिरबुद्धिः	—	दृढनिश्चयी
धृतिः	—	धैर्यम्	—	धैर्य
शौचम्	—	शुद्धिः	—	पवित्रता
अद्रोहः	—	नः द्रोहोऽद्रोहः	—	द्रोह से रहित
अतिमानिता	—	अत्यहंकार	—	अत्यधिक गर्व करना
अनुद्वेगकरं	—	न उद्वेगकरम्	—	व्याकुल न करने वाला
		अनुद्वेगकरम्,		
		अक्षोभकरम्		
दातव्यम्	—	देयम्	—	देना चाहिए
अनुपकारिणे	—	न उपकारी	—	प्रत्युपकाररहिताय
		अनुपकारी तस्मै		प्रत्युपकार रहित
पावकः	—	अग्निः	—	आग
आपः	—	जलानि	—	जल
मारुतः	—	वातः, पवनः	—	वायु
छिन्दन्ति	—	कृन्तन्ति	—	काटते हैं
अवाप्स्यसि	—	प्राप्स्यसि	—	प्राप्त करोगे
कार्यम्	—	करणीयम्, कर्त्तव्यम्	—	करने योग्य
सङ्गम्	—	आसक्तिम्, आसक्ति	—	झुकाव को

### अस्माभिः किम् अधीतम्,

- मानवः स्वयमेव आत्मनो बन्धुः शत्रुर्वा भवति।
- युक्तचेष्टाव्यवहारादिसम्पन्नस्यैव जनस्य योगो दुःखापहारको भवति।
- तेजः, क्षमा, धैर्यं, शौचं, द्रोहरहित्यं अतिमानविहीनता चेति दैवी सम्पद् कथ्यते।
- उद्वेगरहितं, सत्यं, प्रियं, हितकारि च वचनं, स्वाध्यायोऽभ्यासश्चेति वाङ्मयं तपः।
- सुखदुःखलाभालाभजयाजयादिषु समभावसम्पन्नो जनः पापादिकं न प्राप्नोति।  
स्थिरमतिः भक्तिमान् च नरः ईश्वरस्य प्रियो भवति।
- आत्मा शस्त्रैः अछेद्यः अग्निना अदाह्यः जलेन अक्लेद्यः वायुना च अशोष्योऽस्ति।
- अनुपकारिणे दत्तं दानं सात्त्विकं भवति।

## अध्यासः

## मौखिकः

- अधोलिखितानां प्रश्नानाम् उत्तराणि एकैनैव पदेन वदत  
 क. आत्मना कम् उद्धरेत्?  
 ख. युक्ताहारविहारस्य दुःखहा कः भवति?  
 ग. अस्मिन् पाठेऽर्जुनाय अन्यत् किं सम्बोधनं प्रयुक्तम्?  
 घ. शस्त्राणि कं न छिन्दन्ति?  
 ङ. सात्त्विकं दानं कस्मै दीयते?  
 च. कर्मणि सङ्गस्य फलस्य च त्यागः कीदृशे मतः?

## लिखितः

- अधोलिखितानां प्रश्नानाम् उत्तराणि संस्कृतभाषया लिखत  
 क. 'श्रीमद्भगवद्गीता' कस्माद् ग्रन्थाद् उद्धृता?  
 ख. योगः केषां जनानां दुःखं हरति?  
 ग. कीदृशो नरो भगवतः श्रीकृष्णस्य प्रियः?  
 घ. कीदृशं वाक्यं वाङ्मयं तप उच्यते?  
 ङ. दैवीसम्पदं प्राप्तस्य जनस्य के के गुणाः भवन्ति?  
 च. 'युद्धाय युज्यस्व' इति कः कं प्रति कथयति?  
 छ. किं किं त्यक्त्वा नियतं कर्म कुर्यात्?

- क. उदाहरणम् अनुसृत्य सन्धिविच्छेदः क्रियताम्

पदानि	सन्धिविच्छेदः		पूर्यवर्णः	परवर्णः
यथा - आत्मनात्मानम्	आत्मना	+	आत्मानम्	आ आ
नात्मानम्	_____	+	_____	_____
नातिमानिता	_____	+	_____	_____
लाभालाभौ	_____	+	_____	_____
जयाजयौ	_____	+	_____	_____
ह्यात्मनः,	_____	+	_____	_____
क्लेदयन्त्यापः	_____	+	_____	_____
इत्येव	_____	+	_____	_____

ख. अत्र पदेषु सन्धिं कृत्वा समक्षं लिखत

यथा -	आत्मा	+	एव	आत्मैव
	च	+	एव	_____
	न	+	एवम्	_____
यथा -	योगः	+	भवति	योगो भवति
	प्रियः	+	नरः	_____
	ततः	+	युद्धाय	_____

### 3. अर्थमेलनं कुरुत

क	ख
युक्तम्	वासस्थानयो रहितः
मौनी	अखेदकरम्
अनिकेतः	पूज्यतायाः अभिमानस्य भावः
अनुद्वेगकरम्	अधोगतिं न प्रापयेत्
अतिमानिता	यथायोग्यम्
नियतम्	निश्चितम्
अवसादयेत्	मौनधारकः

### 4. प्रस्तुतपाठात् अधोलिखितभावसम्बन्धिनः श्लोकान्/श्लोकांशान् चित्वा समक्षं लिखत

- क. स्वयमेव आत्मनः उन्नतिं कुर्यात्। \_\_\_\_\_
- ख. तदेव श्रेष्ठं दानं यत् प्रत्युपकाराय न दीयते। \_\_\_\_\_
- ग. आत्मा अजरोऽमरश्चास्ति। \_\_\_\_\_
- घ. कर्मणि फलासङ्गस्य त्याग एव प्रशंसनीयः। \_\_\_\_\_

### 5. पाठं पठित्वा रिक्तस्थानानि पूरयत

- क. योगाय उचितः आहारः, उचितः विहारः \_\_\_\_\_, उचितकाले शयनम् \_\_\_\_\_ चेति षड्लक्षणानि अपेक्ष्यन्ते।
- ख. स्थिरमतेः निन्दायां प्रशंसायाञ्च समभावः, \_\_\_\_\_ सन्तुष्टः \_\_\_\_\_ भक्तिमान् चेति षड् लक्षणानि भवन्ति।

ग. वाङ्मयस्य तपसोऽखेदकरं, सत्यं, प्रियं \_\_\_\_\_ च वाक्यम्  
\_\_\_\_\_ अभ्यसनम् च इति षड् लक्षणमुच्यते।

घ. दैवीं सम्पदं प्राप्तस्य जनस्य तेजः, क्षमा, \_\_\_\_\_ शौचम् अद्रोहः  
\_\_\_\_\_ इति षड्गुणा भवन्ति।

6. अधः प्रदत्तविग्रहवाक्यानां समस्तपदानि रचयित्वा समासनामानि अपि लिखत

विग्रहवाक्यानि	समस्तपदानि	समासनाम
यथा — सुखं च दुःखं च	सुखदुःखे	द्वन्द्वः
क. लाभः च अलाभः च	_____	_____
ख. जयः च अजयः च	_____	_____
ग. आहारः च विहारः च	_____	_____
घ. युक्तौ आहारविहारौ यस्य तस्य युक्ताहारविहारस्य	_____	बहुव्रीहिः
ङ. अविद्यमानः निकेतः यस्य सः	_____	_____
च. स्थिरा मतिः यस्य सः	_____	_____
छ. न उद्वेगकरम्	_____	नञ्त्पुरुषः
ज. न उपकारिणे	_____	_____

7. क. यथावश्यकं क्रियापदनिर्माणं कुरुत

क. धातुः	लकारः	पुरुषः	वचनम्	क्रियापदम्
यथा — उत्	+ √हृ विधिलिङ्	प्रथमः	एकवचनम्	उद्धरेत्
√छिद्	लट्	प्रथमः	बहुवचनम्	_____
√युज् (कर्मवाच्य)	लोट	मध्यमः	एकवचनम्	_____
√दा	लट्	प्रथमः	एकवचनम्	_____
√वच्	लट्	प्रथमः	एकवचनम्	_____
√कृ	लट्	प्रथमः	एकवचनम्	_____

ख. शिन्प्रकृतिकं पदं चिनुत

i. दहति, धृतिः भक्तिः, स्तुतिः \_\_\_\_\_

- ii. देशे, काले, पात्रे, अनुपकारिणे \_\_\_\_\_
- iii. वाक्यम्, तपः, एनम्, दानम् \_\_\_\_\_
- iv. सुखदुःखे, समे, लाभालाभौ, जयाजयौ \_\_\_\_\_
- v. दीयते, क्रियते, उच्यते, शोषयति \_\_\_\_\_

ग. अधोलिखितानां पदानां पर्यायं लिखित्वा वाक्यं रचयत —

निन्दा, सन्तुष्टः, उद्वेगकरम्, पात्रे, सुखम्, लाभः, जयः, पापम्, द्रोहः, भौनी।

**योग्यताविस्तारः**

**क. कविपरिचयः**

प्रस्तुतः पाठो महाभारतस्य भीष्मपर्वणि विद्यमानायाः श्रीमद्भगवद्गीतायाः सङ्कलितः। महाभारतं वेदव्यासापरनामधेयेन कृष्णद्वैपायनेन प्रणीतं वर्तते। वेदव्यासः पुराणादीनामनेकेषां ग्रन्थानाम् अपि रचयिता। असौ कौरवपाण्डवानां पितामह आसीत्। स एव वेदमन्त्रान् चतुःसंहितासु विभक्तवान्। यस्माद् हेतोः 'वेदव्यासः' इति तस्य संज्ञा जाता। अनेन महाभारते महाभारतयुद्धस्य कौरवपाण्डवानामैतिह्यस्य वर्णनं कृतम्। अस्मिन् ग्रन्थेऽनेके व्यावहारिका आध्यात्मिकाश्च उपदेशाः विद्यन्ते। अस्यैव अंशभूतायां श्रीमद्भगवद्गीतायां निष्कामकर्मणः आत्मतत्त्वस्य च उपदेशः प्रस्तुतः।

**ख. ग्रन्थपरिचयः**

श्रीमद्भगवद्गीता महाभारतस्य अंशो वर्तते, यत्र श्रीवेदव्यासेन श्रीकृष्णमुखारविन्दमाध्यमेन निष्कामकर्मणोऽध्यात्मविद्यायाश्च अपूर्वं उपदेशः प्रस्तुतः। अस्मिन् ग्रन्थेऽष्टादश अध्यायाः विद्यन्ते श्लोकानाञ्च सप्तशतं वर्तते। कुरुक्षेत्रे अष्टादशदिवसपर्यन्तं कौरवपाण्डवमध्ये भीषणं युद्धम् अभवत् यस्मिन् असंख्याः योद्धारः दिवंगताः। मोहग्रस्तम् अर्जुनं युद्धक्षेत्रे श्रीकृष्णः यत् उपदिशति तदत्र अष्टादशाध्यायेषु वर्णितम्।

**ग. भाषिकविस्तारः**

**पर्यायवाचिनः**

- रिपुः — शत्रुः, अरिः, वैरी
- बन्धुः — बान्धवः, मित्रम्, आत्मीयः

आपः	—	जलम्, उदकम्, वारि
मारुतः	—	वायुः, पवनः, अनिलः
पावकः	—	अग्निः, वह्निः, अनलः
उच्यते	—	कथ्यते, भण्यते, गद्यते
अवाप्स्यसि	—	लप्स्यसे, प्राप्स्यसि, अधिगमिष्यसि

#### घ. भावविस्तारः

##### ईश्वरभक्ताय निर्देशाः

- सर्वधर्मान् परित्यज्य मामेकं शरणं ब्रज॥  
अहं त्वां सर्वपापेभ्यो मोक्षयिष्यामि मा शुचः॥
- अनन्याश्चिन्तयन्तो मां ये जनाः पर्युपासते।  
तेषां नित्याभियुक्तानां योगक्षेमं वहाम्यहम्॥

(श्रीमद्भगवद्गीता 18. 66)

##### आहारः

- आयुःसत्त्वबलारोग्यसुखप्रीतिविवर्धनाः॥  
रस्याः स्निग्धाः स्थिरा हृद्या आहाराः सात्त्विकप्रियाः॥

(श्रीमद्भगवद्गीता 17. 8)

##### दानम्

- दीयमानं हि नापैति भूय एवाभिवर्धते।  
कूप उत्सिध्यमानो हि भवेत्प्लुङ्खोबहूदकः॥

(स्कन्दपुराणम् — मा.कौ. 61)

##### आत्मा

- वासांसि जीर्णानि यथा विहाय नवानि गृह्णाति नरोऽपराणि।  
तथा शरीराणि विहाय जीर्णान्यन्यानि संयाति नवानि देही॥
- न जायते म्रियते वा कदाचिन्नायं भूत्वा भविता वा न भूयः।  
अजो नित्यः शाश्वतोऽयं पुराणो न हन्यते हन्यमाने शरीरे ॥
- आत्मैव ह्यात्मनः साक्षी गतिरात्मा तथात्मनः

(मनुस्मृतिः 8. 84)

दशमः पाठः

## पर्यावरणरक्षणम्

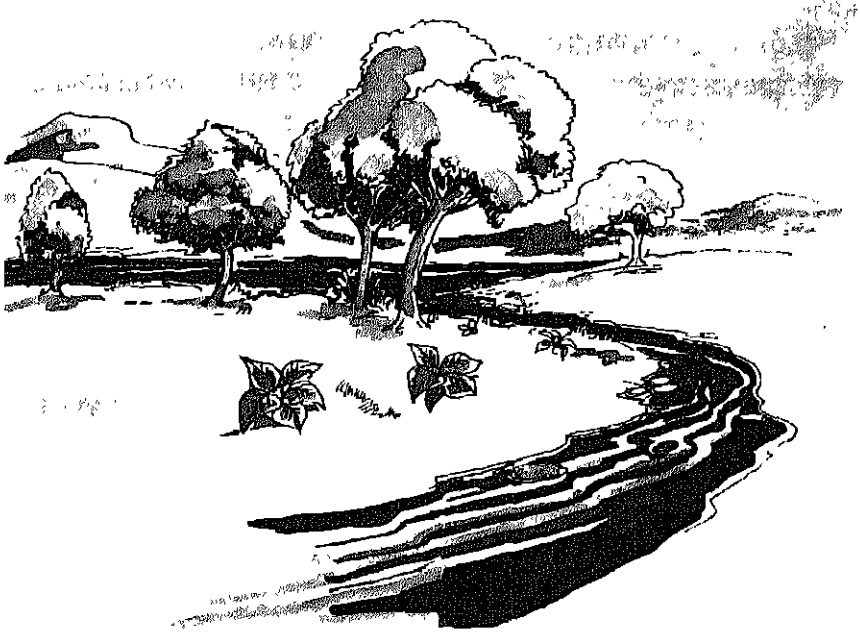
[वर्तमान युग में प्रदूषित वातावरण मानव-जीवन के लिए भयंकर अभिशाप बन गया है। नदियों का जल कलुषित हो रहा है, वन वृक्षों से रहित हो रहे हैं, मिट्टी का कटाव बढ़ने से बाढ़ की समस्याएँ बढ़ती जा रही हैं। कल-कारखानों और वाहनों के धुएँ से वायु विषैली हो रही है। वन्य-प्राणियों की जातियाँ भी नष्ट हो रही हैं। ऐसी परिस्थिति में हमारा कर्तव्य है कि हम पर्यावरण के संरक्षणार्थ उपाय करें। वृक्षों के रोपण, नदियों के जलों की स्वच्छता, ऊर्जा के संरक्षण, बापी, कूप, तड़ाग, उद्यान आदि के निर्माण और उन्हें स्वच्छ रखने में प्रयत्नशील हों ताकि जीवन सुखमय और शांतिप्रद हो सके।]

प्रकृतिः समेषां प्राणिनां संरक्षणाय यतते। इयं सर्वान् पुष्पाति विविधैः प्रकारैः तर्पयति च सुखसाधनैः। पृथिवी, जलं, तेजो, वायुः, आकाशश्चास्याः प्रमुखानि तत्त्वानि। तान्येव मिलित्वा पृथक्तया वाऽस्माकं पर्यावरणं रचयन्ति। आव्रियते परितः समन्तात् लोकोऽनेनेति पर्यावरणम्। यथाऽजातशिशुः मातृगर्भे सुरक्षितस्तिष्ठति तथैव मानवः पर्यावरणकुक्षौ। परिष्कृतं प्रदूषणरहितं च पर्यावरणमस्मभ्यं सांसारिकं जीवनसुखं, सद्दिचारं, सत्सङ्कल्पं माङ्गलिकसामग्रीञ्च प्रददाति। प्रकृतिकोपैः आतङ्कितो जनः किं कर्तुं प्रभवति? जलप्लावनैः अग्निभयैः, भूकम्पैः, वात्याचक्रैः, उल्कापातादिभिश्च सन्ताप्तस्य मानवस्य क्व मङ्गलम्?

अतएव प्रकृतिरस्माभिः रक्षणीया। तेन च पर्यावरणं स्वयमेव रक्षितं भविष्यति। प्राचीनकाले लोकमङ्गलाशंसिन ऋषयो वने निवसन्ति स्म। यतो हि वने एव सुरक्षितं पर्यावरणमुपलभ्यते स्म। विविधा विहगाः कलकूजितैस्तत्र श्रोत्ररसायनं



ददति। सरितो गिरिनिर्झराश्च अमृतस्वादु निर्मलं जलं प्रयच्छन्ति। वृक्षा लताश्च



फलानि पुष्पाणि इन्धनकाष्ठानि च बाहुल्येन समुपहरन्ति। शीतलमन्दसुगन्धवनपवना औषधकल्पं प्राणवायुं वितरन्ति।

परन्तु स्वार्थान्धो मानवस्तदेव पर्यावरणमद्य नाशयति। स्वल्पलाभाय जना बहुमुल्यानि वस्तूनि नाशयन्ति। यन्त्रागाराणां विषाक्तं जलं नद्यां निपात्यते येन मत्स्यादीनां जलचराणां च क्षणेनैव नाशो जायते। नदीजलमपि तत्सर्वथाऽपेयं जायते। वनवृक्षा निर्विवेकं छिद्यन्ते व्यापारवर्धनाय, येन अवृष्टिः प्रवर्धते, वनपशवश्च शरणरहिता ग्रामेषु उपद्रवं विदधति। शुद्धवायुरपि वृक्षकर्तनात् सङ्कटापन्नो जातः। एवं हि स्वार्थान्धमानवैर्विकृतिमुपगता प्रकृतिरेव तेषां विनाशकर्त्री सञ्जाता। पर्यावरणे विकृतिमुपगते जायन्ते विविधा रोगा भीषणसमस्याश्च। तत्सर्वमिदानीं चिन्तनीयं प्रतिभाति।

धर्मो रक्षति रक्षितः इत्यार्षवचनम्। पर्यावरणरक्षणमपि धर्मस्यैवाङ्गमिति ऋषयः प्रतिपादितवन्तः। तत एव वापीकूपतडागादिनिर्माणं देवायतनविश्रामगृहादिस्थापनञ्च धर्मसिद्धेः स्रोतोरूपेणाङ्गीकृतम्। कुक्कुटसूकरसर्पनकुलादिस्थलचरा, मत्स्यकच्छपमकरप्रभृतयो जलचराश्चापि रक्षणीया, यतस्ते स्थलमलापनोदिनो जलमलापहारिणश्च। प्रकृतिरक्षयैव सम्भवति लोकरक्षेति न संशयः।

शब्दार्थाः

पुष्पाति	— पोषणं करोति	— पुष्ट करता है
अजात शिशुः	— अनुत्पन्न जातकः	— पैदा न हुआ शिशु
कुक्षी	— गर्भ	— गर्भ में
जलप्लावनैः	— जलोघैः	— बाढ़ से
वात्याचक्रैः	— वातचक्रैः	— आँधी, बवंडर
लोकमङ्गलाशंसिनः	— समाजकल्याणकामाः	— जनता के कल्याण को चाहने वाले
श्रोत्ररसायनम्	— कर्णामृतम्	— कान को अच्छा लगने वाला
गिरिनिर्झराः	— पर्वतानां प्रपाताः	— पहाड़ों से निकलने वाले झरने
यन्त्रागाराणाम्	— यन्त्रालयानाम्	— कारखानों के
अपेयम्	— पातुम् अयोग्यम्	— जो पिया न जा सके
वृक्षकर्तनात्	— वृक्षाणाम् उच्छेदात्	— पेड़ों के काटने से
देवायतनम्	— देवालयः, मन्दिरम्	— मन्दिर
स्थलमलापनोदिनः	— भूमिमलापसारिणः	— भूमि की गन्दगी को दूर करने वाले

अस्माभिः किम् अधीतम् ?

- पृथिवी, जलं, तेजो, वायुराकाशश्चेति प्रकृतेः प्रमुखतत्त्वानि।
- एतैः तत्त्वैरेव पर्यावरणस्य रचना भवति।
- प्रदूषणविरहितमेव पर्यावरणं जनानां लाभाय वर्तते।
- अद्य मानवः स्वार्थेन पर्यावरणं प्रदूषयति विविधाः समस्याश्च जनयति।
- यथा धर्मो रक्षति रक्षितः तथैव पर्यावरणमपि रक्षितमेव अस्माकं रक्षां करोति।

## अभ्यासः

## मौखिकः

1. प्रश्नानाम् उत्तराणि एकैनेव पदेन वदत
  - क. प्रकृतिः केषां संरक्षणाय यतते?
  - ख. जनाः किमर्थं बहुमूल्यानि वस्तूनि नाशयन्ति?
  - ग. मानवः कुत्र सुरक्षितस्तिष्ठति?
  - घ. पर्यावरणं स्वयं कस्य रक्षणेन रक्षितो भविष्यति?
  - ङ. सुरक्षितं पर्यावरणं कुत्र उपलभ्यते?
  - च. शुद्धवायुः कस्मात् सङ्ग्रहापन्नो जातः?
  - छ. कीदृशः धर्मः रक्षति?

## लिखितः

1. प्रश्नानाम् उत्तराणि संस्कृतभाषया लिखत
  - क. प्रकृत्याः प्रमुखतत्त्वानि कानि सन्ति?
  - ख. अस्मभ्यं सांसारिकजीवनसुखं, सत्सङ्कल्पं च कः ददाति?
  - ग. मत्स्यादीनां जलचराणां नाशः कस्मात् कारणात् जायते?
  - घ. वने शीतलमन्दसुगन्धवनपवनाः किं वितरन्ति?
  - ङ. पर्यावरणे विकृतिमुपगते किं भवति?
2. अधोलिखितपदेषु सन्धि/सन्धिविच्छेदं कुरुत
 

क. यथा —	परि	+	आवरणम्	=	पर्यावरणम्
	तानि	+	एव	=	_____
	_____	+	_____	=	इत्यार्षवचनम्
ख. यथा —	च	+	अस्याः	=	चास्याः
	स्वार्थ	+	अन्धाः	=	_____
	_____	+	_____	=	यन्त्रागारः
	मत्स्य	+	_____	=	मत्स्यादीनाम्
ग. यथा —	आकाशः	+	च	=	आकाशश्च
	सामग्रीम्	+	च	=	_____
	_____	+	_____	=	जलचराणाञ्च

घ. यथा - क्षणेन	+	एव	=	क्षणेनैव
धर्मस्य	+	एव	=	_____
_____	+	_____	=	प्रकृतिरक्षयैव

### 3. उदाहरणानुसारं पदरचनां कुरुत

क. उदाहरणम् - जले चरन्ति इति	जलचराः
स्थले चरन्ति इति	_____
खे चरन्ति इति	_____
निशायां चरन्ति इति	_____
वने चरन्ति इति	_____
ख. न पेयम् इति	अपेयम्
न वृष्टिः इति	_____
न सुखम् इति	_____
न दुःखम् इति	_____

### 4. विशेषणानां मेलनं उपयुक्त विशेष्यैः सह कुरुत

विशेषणानि	विशेष्यानि
प्रमुखानि	पर्यावरणम्
सांसारिकम्	वायुः
सुरक्षितम्	तत्त्वानि
निर्मलम्	जीवनसुखम्
शुद्धः	जलम्

### 5. उदाहरणम् अनुसृत्य यथानिर्देशं पदनिर्माणं कुरुत

क. यथा -	√चिन्त् + अनीयर्	=	चिन्तनीयः
	√रक्ष् + अनीयर्	=	_____
वि +	√_____ + _____	=	वितरणीयः
_____	+ √ पद् + णिच् +	=	प्रतिपादनीयः

### 6. निर्देशानुसारं परिवर्तनं कुरुत

यथा - स्वार्थान्धो मानवोऽद्य पर्यावरणं नाशयति (बहुवचने)

- स्वार्थान्धाः मानवाः अद्य पर्यावरणं नाशयन्ति।
- अस्मिन् पर्यावरणे सन्तप्तस्य मानवस्य क्व मङ्गलम्।  
(बहुवचने)
- अजातशिशवः मातृगर्भेषु सुरक्षिताः भवन्ति। (एकवचने)
- वनपशवः ग्रामेषु उपद्रवं कुर्वन्ति (एकवचने)
- गिरिनर्झराः निर्मलं जलं प्रयच्छन्ति (द्विवचने)

#### 7. रचनाभ्यासः

क. पाठं पठित्वा पर्यावरणरक्षणार्थं भवन्तः/भवत्यः कान् कान् प्रयत्नान् करिष्यन्ति  
इति पञ्चवाक्यैः लिखन्तु -

यथा - अहं विषादतः जलं नद्यां नैव पातयिष्यामि।

i.

ii.

iii.

iv.

v.

ख. पर्यावरणरक्षणमपि ..... स्रोतोरूपेणाङ्गीकृतम् इति। सम्यक्  
पठित्वा प्रश्नद्वयं रचयत

#### योग्यताविस्तारः

क. च्वि प्रत्ययप्रयोगः अभूततद्भावे च्वि-या स्थितिः पूर्वं न स्यात्  
तदुत्पत्त्यर्थं च्वि-प्रत्ययस्य प्रयोगः क्रियते। च्वि-प्रत्ययस्य प्रयोगः केवलं अस्-भू-कृ-धातुभ्य  
एव भवति। प्रत्ययस्य इकारस्य दीर्घत्वं जायते। यथा -

अङ्गीकृतम् - अनङ्गीकृतम् अङ्गीकृतम्  
(अस्वीकृतं स्वीकृतम्)

कृष्णीक्रियते - अकृष्णः कृष्णः क्रियते

ब्रह्मीभवति - अब्रह्मा ब्रह्मा भवति

ख. अधोलिखितयोः शब्दयुग्मयोः भेदः दर्शनीयः

सङ्कल्प - सत्सङ्कल्प

आचारः - सदाचारः

जनः	—	सज्जनः
सङ्गतिः	—	सत्सङ्गतिः
मतिः	—	सन्मतिः

ग. आर्षवचनम् — महर्षे कथनं। महर्षिप्रोक्तं वचनम् इत्यर्थः  
आर्ष वचनम् — कर्मधारयरामासः।

घ. पञ्चतत्त्वानि —

पृथिवी, जलम्, तेजः, वायुः आकाशः च एतानि पञ्चतत्त्वानि वैरिदं शरीरं निर्मितम्।

ङ. पशुपक्षिणां ध्वनयः —

बुक्कनं	(कुक्कुरस्य)
कायनं	(काकरस्य)
रम्भनं	(गवां)
गर्जनं	(सिंहस्य)
नदनं	(गजस्य)
फूत्कारः	(सर्पस्य)
रेभनं	(महिष्याः)
चीभनं	(चटकायाः)
ह्लेषणं	(अश्वस्य)

च. पर्यावरणसम्बन्धिनः एते श्लोकाः पठनीयाः स्मरणीयाश्च —

- पर्यावरणस्य जनकाः वृक्षाः वन्दनीयाः आसन् अतः अस्माकं संस्कृतौ  
वृक्षाणामुत्पाटनं वर्जितमासीत् —  
दशकूपसमा वापी दशवापीसमः ह्रदः।  
दशह्रदसमः पुत्रो दशपुत्रसमो ब्रूमः॥ (मत्स्यपुराणम्)
- तुलसी इति पादपः धार्मिकदृष्ट्या तु पूज्यः एव चिकित्सादृष्ट्या चाऽपि रक्षणीयः।  
गृहप्राङ्गणे तु अवश्यं रोपणीयः। तुलसी वायुप्रदूषणम् अपनयति इति निगदितं  
पुराणेषु वैद्यकग्रंथेषु च —  
'तुलसी' कानने चैव गृहे यस्यावतिष्ठते।  
तद्गृहं तीर्थमित्याहुः नायान्ति यमकिंकराः॥  
'तुलसी' गंधमादाय यत्र गच्छति मारुतः।

दिशोर्दश पुनात्याशु भूतग्रामाश्चतुर्विधान्॥ (पट्योत्तरखण्डम्)

तुलसीरसः विषमज्वरं नाशयति —

पीतो मरीचिचूर्णेन तुलसीपत्रजो रसः।

द्रोणपुष्परसोऽप्येवं निहन्ति विषमं ज्वरम्॥ (शाङ्गधरः)

■ वृक्षारोपणस्य महत्त्वम्

देवलोकगतस्यापि नाम तस्य न नश्यति।

अतीतानगतांश्चैव पितृवंशांश्च भारत॥

तारयेद् वृक्षरोपी तु तस्माद् वृक्षान् प्ररोपयेत्।

तस्य पुत्रा भवन्त्येव पादपा नात्र संशयः॥



## एकादशः पाठः

### वाङ्मनःप्राणस्वरूपम्

[प्रस्तुत पाठ छान्दोग्योपनिषद् के छठे अध्याय के पञ्चम खण्ड पर आधारित है। इसमें मन, प्राण तथा वाक् के संदर्भ में रोचक विवरण प्रस्तुत किया गया है। उपनिषद् के गूढ़ प्रसंग को बोधगम्य बनाने के उद्देश्य से इसे आरुणि एवं श्वेतकेतु के संवादरूप में प्रस्तुत किया गया है। आर्ष-परंपरा में ज्ञान-प्राप्ति के तीन उपाय बताए गए हैं उनमें परिप्रश्न भी एक है। यहाँ गुरुसेवापरायण शिष्य वाणी, मन तथा प्राण के विषय में प्रश्न पूछता है और वत्सल आचार्य उन प्रश्नों के उत्तर देते हैं।]

श्वेतकेतुः — भगवन् ! श्वेतकेतुरहं वन्दे।

आरुणिः — वत्स ! चिरञ्जीव।

श्वेतकेतुः — भगवन् ! किञ्चित्प्रष्टुमिच्छामि।

आरुणिः — वत्स ! किमद्य त्वया प्रष्टव्यमस्ति?

श्वेतकेतुः — भगवन् ! प्रष्टुमिच्छामि किमिदं मनः?

आरुणिः — वत्स ! अशितस्यान्नस्य योऽणिष्ठः तन्मनः।

श्वेतकेतुः — कश्च प्राणः?

आरुणिः — पीतानाम् अपां योऽणिष्ठः स प्राणः।

श्वेतकेतुः — भगवन् ! केयं वाक्?

आरुणिः — वत्स ! अशितस्य तेजसा योऽणिष्ठः सा वाक्। सौम्य ! मनः

अन्नमयं, प्राणः आपोमयः वाक् च तेजोमयी भवति इत्यप्यवधार्यम्।



श्वेतकेतुः - भगवन् ! भूय एव मां विज्ञापयतु।



आरुणिः - सौम्य ! एष उपदिशामि। सावधानं शृणु। मथ्यमानस्य दध्नः

योऽणिमा, स ऊर्ध्वः समुदीषति। तत्सर्पिः भवति।

श्वेतकेतुः - भगवन् ! व्याख्यातं भवता घृतोत्पत्तिरहस्यम्। भूयोऽपि  
श्रोतुमिच्छामि।

आरुणिः - एवमेव सौम्य ! अश्नमानस्य अन्नस्य योऽणिमा, स ऊर्ध्वः  
समुदीषति। तन्मनो भवति। अवगतं न वा?

श्वेतकेतुः - सम्यगवगतं भगवन् !

आरुणिः - वत्स ! पीयमानानां अपां योऽणिमा स ऊर्ध्वः समुदीषति स एव प्राणो  
भवति।

श्वेतकेतुः — भगवन् ! वाचमपि विज्ञापयतु।

आरुणिः — सौम्य ! अश्मन्मानस्य तेजसो योऽणिमा, स ऊर्ध्वः समुदीषति । सा खलु वाग्भवति । वत्स ! उपदेशान्ते भूयोऽपि त्वां विज्ञापयितुमिच्छामि यदन्नमयं भवति मनः, आपोमयो भवति प्राणस्तेजोमयी च भवति वागिति। किञ्च यादृशमन्नादिकं गृह्णाति मानवस्तादृशमेव तस्य चित्तादिकं भवतीति मदुपदेशसारः। वत्स ! एतत्सर्वं हृदयेन अवधारय।

श्वेतकेतुः — यदाज्ञापयति भगवन् ! एष प्रणमामि।

आरुणिः — वत्स ! चिरञ्जीव। तेजस्वि नावधीतमस्तु।

शब्दार्थाः

प्रष्टुम्	—	प्रश्नं कर्तुम्	—	प्रश्न करने के लिये, पूछने के लिए
प्रष्टव्यम्	—	पृच्छाविषयीकरणीयम्	—	पूछने योग्य
अशितस्य	—	भक्षितस्य	—	खाये गये
अणिष्ठः	—	लघिष्ठः, लघुतमः	—	अत्यन्त लघु अथवा सर्वाधिक लघु
अन्नमयम्	—	अन्नविकारभूतम्	—	अन्न से निर्मित
आपोमयः	—	जलमयः	—	जल से निर्मित, जल में परिणत
तेजोमयः	—	अग्निमयः	—	अग्नि का परिणामभूत
अवधार्यम्	—	अवगन्तव्यम्	—	समझने योग्य
विज्ञापयतु	—	प्रबोधयतु,	—	समझाइये
भूयोऽपि	—	पुनरपि	—	एक बार और
समुदीषति	—	समुत्तिष्ठति, समुद्याति, समुच्छलति	—	ऊमर उठता है
सर्पिः	—	घृतम्, आज्यम्	—	घी
अश्मन्मानस्य	—	भक्ष्यमाणस्य, निगीर्यमाणस्य	—	खाये जाते हुए
उपदेशान्ते	—	प्रवचनान्ते	—	व्याख्यान के अन्त में
तेजस्वि	—	तेजोयुक्तम्	—	तेजस्विता से युक्त
अवधीतम्	—	अधिगतम्,	—	पढा गया

### अस्माभिः किम् अधीतम् ?

- श्वेतकेतुः आचार्यम् आरुणिं उपगम्य अभिवादनानन्तरम् आशीर्वचनं प्राप्य मनः स्वरूपविषये पृच्छति।
- आरुणिः कथयति यत् खादितस्य अन्नस्य योऽणिष्ठः वर्तते तदेव मनः।
- तदा सः प्राणविषये पृच्छति आरुणिश्च प्रत्यवदति यत् पीतानां जलानाम् यो अणिष्ठः स प्राणो वर्तते।
- तदनन्तरं वाग्विषये श्वेतकेतोः प्रश्नं श्रुत्वा आचार्योऽशितस्य तेजसोऽणिष्ठं तत्त्वं वाक् रूपेण प्रतिपादयति।
- आरुणिः एतदपि बोधयति यत् मनोऽन्नमयं, प्राणः आपोमयः, वाक् च तेजोगयी इति।



अभ्यासः

**मौखिकः**

**1. लघुवाक्यैः प्रश्नोत्तराणि वदत**

- क. श्वेतकेतुना अभिवादितः आचार्यः आरुणि किम् अवदत्?
- ख. मनः कस्य अणिष्ठः?
- ग. पीतानाम् अपाम् प्राणः कीदृशः कथितः?
- घ. अन्नमयं किं भवति?
- ङ. प्राणः अपां विकारो भवति तेजसां वा?
- च. आरुणिः श्वेतकेतवे कमाशीर्वादं दत्तवान्?

**लिखितः**

**1. रिक्तस्थानं कोष्ठकदत्तवैकल्पिकशब्देन पूरयत**

- क. अशितस्यान्नस्य योऽणिष्ठः (तत् मनः/स प्राणः/सा वाक्) भवति।
- ख. मध्यमानस्य दध्नः योऽणिमा स (ऊर्ध्वः/नीचैः/तिर्यक्) समुदीषति।
- ग. मध्यमानस्य दध्नः अणिमा (सर्पिः/जलं/दुग्धं) भवति।
- घ. स एव प्राणो भवति यो (अपाम्/तेजसाम्/अन्नानाम्) अणिमा।
- ङ. अन्नमयं भवति (मनः/वचः/प्राणतत्त्वम्)
- च. यदद्य श्रुतं तत् (हृदयेन/मा/यथारुचि) अवधारय।

**2. उदाहरणानुसारेण निम्नलिखितक्रियापदानां यथानिर्दिष्टं रूपं लिखत**

- क.  $\sqrt{\text{प्रच्छ}}$  + तुमुन् = प्रच्छुम्
- ख.  $\sqrt{\text{अश्}}$  + तुमुन् =
- ग. वि + आ +  $\sqrt{\text{ख्या}}$  + तुमुन् =
- घ. वि +  $\sqrt{\text{ज्ञा}}$  + णिच् + तुमुन् =
- ङ.  $\sqrt{\text{वन्द}}$  + तुमुन् =
- च.  $\sqrt{\text{जीव्}}$  + तुमुन् =

**3. यथानिर्देशं पदनिर्माणम् कुरुत**

यथा — वन्द, (आ.) लट्लकारः, उत्तमपुरुषः, एकवचनम् — वन्दे

जीव्, लोट् लकार, म.पु., एकवचनम् —

वि (उप.) + ज्ञा + णिच् प्रत्ययः, लोट् लकार, प्र.पु., एकवचनम्

सम् (उप.) + उत् (उप.) इष् (गतौ, दिवादिगणः) लट् ल., प्र.पु.,  
एकवचनम्

अव (उप.) + धृ + णिच् प्र., लोट् लकार, म.पु., एकवचनम्

4. प्रकृति प्रत्ययसंयोगपूर्वकं उदाहरणमनुसृत्य पदनिर्माणं कुरुत

प्रकृतिः	प्रत्ययः	संयोगेन निर्मितं पदम्
यथा - √प्रच्छ्	तव्यत्	प्रच्छ्यम्
√अश्	क्त	
वि (उप०) + आ० (उप०)	+ √ख्या क्त	
वि (उप) + √ज्ञा + णिच्	+ तुमुन्	
√पा	क्त	
√पा (कर्मवाच्ये)	शानच्	

5. 'क' भागे लिखितानां पदानां समक्षं 'ख' भागे लिखितेषु पदेषु उचितं पदं चित्वा विपर्यायं लिखत

उर्ध्वम्	—	गरिष्ठः
अणिष्ठः	—	न किमपि
इच्छामि	—	अघः
सर्वम्	—	अनवधीतम्
अवधीतम्	—	नेच्छामि

6. उदाहरणम् अनुसृत्य प्रदत्तक्रियापदानि प्रयुज्य वाक्यानि रचयत

यथा — अहं स्वदेशं सेवितुम् इच्छामि।

क. \_\_\_\_\_ उपदिशामि।

ख. \_\_\_\_\_ प्रणमामि।

ग.	_____	आज्ञापयामि।
घ.	_____	पृच्छामि।
ङ.	_____	विज्ञापयामि।
च.	_____	उपदिशामि।
छ.	_____	अश्नामि।
ज.	_____	अवगच्छामि।

### 7. पाठम् आधृत्य अधोलिखितं गुरुशिष्यसंवादं पूरयत

गुरुः — मथ्यमानस्य \_\_\_\_\_ योऽणिमा स ऊर्ध्वः समुदीषति। तत् \_\_\_\_\_ भवति।

शिष्यः — भगवन् ! \_\_\_\_\_ भवता \_\_\_\_\_ । भूयोऽपि \_\_\_\_\_ ।

गुरुः — सौम्य! अश्नमानस्य \_\_\_\_\_ योऽणिमा स ऊर्ध्वः \_\_\_\_\_ भवति।  
अवगतं न वा।

शिष्यः — \_\_\_\_\_ अवगतं भगवन्।

गुरुः — वत्स ! \_\_\_\_\_ अपां योऽणिमा स एव \_\_\_\_\_ भवति । एतत्सर्वम्  
\_\_\_\_\_ हृदयेन।

शिष्यः — यदाज्ञापयति \_\_\_\_\_ । एष \_\_\_\_\_ ।

### योग्यताविस्तारः

#### क. ग्रन्थपरिचयः

छान्दोग्योपनिषद् उपनिषद्ब्रह्मण्यस्य एकं बहुमूल्यं रत्नम् अस्ति। इयम् उपनिषद् सामवेदीयस्य तलवकारस्य ब्राह्मणस्य भागो विद्यते। अस्या वर्णनपद्धतिः वैज्ञानिकी युक्तियुक्ता चास्ति। अस्याम् आत्मज्ञानेन सह तदुपयोगिकर्मण उपासनायाश्च सम्यग् वर्णनं वर्तते। इयम् अष्टसु अध्यायेषु विभक्ता। अस्याः षष्ठेऽध्याये 'तत्त्वमसि' इत्येतद् अधिकृत्य विस्तरेण विवेचनं विद्यते।

#### ख. भावविस्तारः

आरुणिः स्वपुत्रं श्वेतकेतुम् उपदिशति अन्नमशितं त्रेधा विधीयते। तस्य यः स्थविष्ठो धातुः सः पुरीषं भवति यो मध्यमः सः मांसं भवति, योऽणिष्ठः सः मनः। आपः पीतास्त्रेधा

विधीयन्ते — तासां यः स्थविष्ठो धातुः सः मूत्रं भवति, यो मध्यः सः लोहितं, योऽणिष्ठः सः प्राणः। तेजोऽशितं त्रेधा विधीयते — तस्य यः स्थविष्ठो धातुः सोऽस्थि भवति, यो मध्यमः सः मज्जा, योऽणिष्ठः सा वाक्।

अद्यते इति अन्नम्। अन्नं वै मनः। न्यायेन सत्यक्षणेन च अर्जितम् अन्नं सात्त्विकं भवति। तद्भक्षणेन मनः सात्त्विकं भवति। दूषितभावनया अन्यायेन च अर्जितम् अन्नं राजसं तामसं वा भवति। तद्भक्षणेन च मानवस्य मनोऽपि राजसं तामसं वा भवति।

आपोमयो प्राणः। जलमेव जीवनं लोके। तैलधृतादिभक्षणात् वाक् विशदा भाषणादिकार्येषु च समर्था भवति। अतः तेजोमयी वाक्।

■ अन्नमयं हि मनः, आपोमयः प्राणः तेजोमयी वाक् षोडशकलः पुरुषः। यदि सः पञ्चदशदिनानि यावत् भोजनं न करोति, जलं च न पिबति तर्हि तस्य षोडशकलासु केवलम् एकैव कला अवशिष्टा भवति। यथा इन्धने प्रज्वलिते एकोऽपि खद्योतमात्रोऽवशिष्टोऽङ्गारो न बहु दहेत् तथैव अन्नपानरहितो जनो वेदज्ञानं कर्तुं समर्थो न भवति। अतः श्वेतकेतुः यदा प्रतिदिनं भोजनं कृत्वा जलं च पीत्वा स्वपितुः समक्षम् उपस्थितोऽभवत् तदा असौ ऋग्वेदादीनां सर्वेषां ग्रन्थानां सर्वाणि विस्मृतान्यपि उत्तराणि दातुं समर्थो जातः। अतः मनोऽन्नमयं, प्राणो जलमयः, वाक् च तेजोमयी इति सर्वथा सत्यमेव।

ग. भाषिकविस्तारः

मयट्-प्रत्यय प्राचुर्यार्थं प्रयुज्यते।

यथा —	शान्ति	+	मयट्	=	शान्तिमयः
	आनन्द	+	मयट्	=	आनन्दमयः
	सुख	+	मयट्	=	सुखमयः
	तेजः	+	मयट्	=	तेजोमयः
मयट्	प्रत्ययस्य	प्रयोगो	विकारार्थोऽपि	क्रियते —	
यथा —	मृत्	+	मयट्	=	मृण्मयः
	स्वर्ण	+	मयट्	=	स्वर्णमयः
	लौह	+	मयट्	=	लौहमयः

## जलम्

जीवयति लोकान् जलम् — पञ्चभूतान्तर्गतभूतविशेषः।

पर्यायवाचिनः — वारि, पानीयम्, उदकम्, उदम्, सलिलम्, तोयम्, नीरम्, अम्बु, अम्भस्, पयस्।

पानीयं प्राणिनां प्राणास्तदायत्तं हि जीवनम्।

तोयाभावे पिपासार्तः क्षणालप्राणैर्विमुच्यते॥

## ल्यप् प्रत्ययप्रयोगः

गिरीक्ष्	—	निप्	+	ईक्ष्	+	ल्यप्
आदाय	—	आ	+	दा	+	ल्यप्
विधूय	—	वि	+	धू	+	ल्यप्
अतिक्रम्य	—	अति	+	क्रम	+	ल्यप्

## मनस्

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमा	मनः	मनसी	मनांसि
द्वितीया	मनः	मनसी	मनांसि
तृतीया	मनसा	मनोभ्याम्	मनोभिः
चतुर्थी	मनसे	मनोभ्याम्	मनोभ्यः
पंचमी	मनसः	मनोभ्याम्	मनोभ्यः
षष्ठी	मनसः	मनसोः	मनसाम्
सप्तमी	मनसि	मनसोः	मनस्सु
सम्बोधन	हे मनः	हे मनसी	हे मनांसि

अनुरूप शब्दाः — अम्भस्, पयस्, यशस्, तेजस्, नभस्।



द्वादशः पाठः

## जटायूरावणयुद्धम्

[प्रस्तुत पाठ्यांश आदिकवि वाल्मीकि-प्रणीत रामायण के वनकांड से उद्धृत किया गया है जिसमें जटायु-रावण-युद्ध का वर्णन है। सीता का करुण विलाप सुनकर पक्षिश्रेष्ठ जटायु उनकी रक्षा के लिये दौड़ पड़ते हैं। वे रावण को परदाराभिमर्शनरूप निन्दा दुष्कर्म से विरत होने का उपदेश देते हैं, परंतु रावण की मनोवृत्ति को अपरिवर्तित देख, उस पर भयावह आक्रमण भी करते हैं। तीखे नखों तथा पंजों से महाबली जटायु रावण के शरीर में अनेक घाव कर देते हैं तथा उसके विशाल धनुष को भी चरणों के प्रहार से खंडित कर देते हैं। टूटे धनुष वाला, मारे गये अश्वों तथा सारथी वाला रावण विरथ होकर, पृथ्वी पर गिर पड़ता है। कुछ क्षणों के अनन्तर ही क्रोधांध रावण जटायु पर प्राणघातक प्रहार करता है परंतु पक्षिश्रेष्ठ जटायु भी उस पर चञ्चु-प्रहार करके, उसकी बायें भाग की दशों भुजाओं को क्षत-विक्षत कर देते हैं।]

सा तदा करुणा वाचो विलपन्ती सुदुःखिता।

वनस्पतिगतं गृध्रं ददर्शायतलोचना ॥१॥

जटायो पश्य मामार्य ह्रियमाणामनाथवत् ।

अनेन राक्षसेन्द्रेण करुणं पापकर्मणा ॥२॥

तं शब्दमवसुप्तस्तु जटायुरथ शुश्रुवे ।

निरीक्ष्य रावणं क्षिप्रं वैदेहीं च ददर्श सः ॥३॥

ततः पर्वतशृङ्गाभस्तीक्ष्णतुण्डः खगोत्तमः।  
 वनस्पतिगतः श्रीमान्व्याजहार शुभां गिरम् ॥4॥  
 निवर्तय मतिं नीचां परदाराभिमर्शनात्।  
 न तत्समाचरेद्धीरो यत्परोऽस्य विगर्हयेत् ॥5॥  
 वृद्धोऽहं त्वं युवा धन्वी सरथः कवची शरी।  
 न चाप्यादाय कुशली वैदेहीं मे गमिष्यसि ॥6॥  
 तस्य तीक्ष्णनखाभ्यां तु चरणाभ्यां महाबलः।  
 चकार बहुधा गात्रे व्रणान्पततगसत्तमः ॥7॥  
 ततोऽस्य सशरं चापं मुक्तामणिविभूषितम्।  
 चरणाभ्यां महातेजा बभञ्जास्य महद्धनुः ॥8॥  
 स भग्नधन्वा विरथो हताश्वो हतसारथिः।  
 अङ्गेनादाय वैदेहीं पपात भुवि रावणः ॥9॥  
 संपरिष्वज्य वैदेहीं वामेनाङ्गेन रावणः।  
 तलेनाभिजघानाशु जटायुं क्रोधमूर्च्छितः ॥10॥  
 जटायुस्तमतिक्रम्य तुण्डेनास्य खगाधिपः।  
 वामबाहून्दश तदा व्यपाहरदरिन्दमः ॥11॥

शब्दार्थाः

ह्रियमाणाम्	—	नीयमानाम्	—	ले जाई जाती हुई, अपहरण की जाती हुई
राक्षसेन्द्रेण	—	दानवपतिना	—	राक्षसों के राजा द्वारा
परदाराभिमर्शनात्	—	परस्त्रीदुषणात्	—	पराई स्त्री के दोष से
विगर्हयेत्	—	निन्दात्	—	निन्दा करनी चाहिए
धन्वी	—	धनुर्धरः	—	धनुर्धर
कवची	—	कवच धारी	—	कवच को धारण किए हुए
शरी	—	बाणधरः	—	बाण को लिए हुए

वैदेहीम्	—	सीताम्	—	सीता को
व्रणान्	—	प्रहारजनित	—	प्रहार (चोट) से होने वाले
		स्फोटान्		घावों को
बभञ्ज	—	भग्नं कृतवान्	—	तोड़ दिया
पतगेश्वरः	—	जटायुः	—	जटायु (पक्षिराज)
विधूय	—	अपसार्य	—	दूर हटाकर।
भग्नधन्वा	—	भग्नं, धनुः	—	टूटे हुए धनुष वाला।
		यस्य सः		
हताश्वः	—	हताः अश्वाः	—	मारे गए घोड़ों वाला।
		यस्य सः		
आदाय	—	गृहीत्वा	—	लेकर
अभिजघान्	—	हतवान्	—	मार डाला।
आशु	—	शीघ्रम्	—	शीघ्र ही।
तुण्डेन	—	चञ्च्वा, मुखेन	—	चोंच के द्वारा
खगाधिपः	—	पक्षिराजः	—	पक्षियों का राजा
अरिन्दमः	—	शत्रुदमनः,	—	शत्रुओं को नष्ट करने वाला
		शत्रुनाशकः		

### अस्माभिः किम् अधीतम् ?

- रावणेन हता सीता जटायुं सहायतार्थम् आह्वयति, सीतावचनं श्रुत्वा जटायुः तत्र गच्छति रावणं च परदारभिमर्शनात् मतिं निवर्तयितुं कथयति।
- यदा रावणः जटायोः वार्तां न स्वीकरोति तदा युद्धे जटायुः रावणस्य शरीरे स्वनखाभ्याम्, चरणाभ्याम् च व्रणान् अकरोत्। रावणस्य सशरं चापं महद्भुजः च स्वपक्षाभ्यां बभञ्ज।
- क्रोधवशात् रावणः वैदेहीं संगृह्य एव जटायुं मारयितुम् उद्यतः अभवत्।
- जटायुः रावणस्य दश वामबाहून् व्यपाहरत्।

## मौखिकः

## 1. प्रश्नानाम् उत्तराणि एकपदेन वदत

- क. “जटायो ! पश्य” इति का वदति?
- ख. वैदेही शब्दः कस्मै प्रयुक्तः?
- ग. तीक्ष्णनखाभ्यां व्रणान् कः अकरोत्?
- घ. पतगेश्वरः रावणस्य कीदृशं चापं सशरं बभञ्ज?
- ङ. हतारवो हतसारथिः रावणः कुत्र अपतत्?

## 2. कः कम् अवदत्

यथा — पश्य मामार्य ह्रियमाणामनाथवत्	कः सीता	कम् जटायुम्
क. वृद्धोऽहम् त्वं युवा	_____	_____
ख. युध्यस्व यदि शूरोऽसि	_____	_____
ग. न तत्समाचरेद्धीरो	_____	_____
घ. न चाप्यादाय कुशली वैदेहीं मे गमिष्यसि	_____	_____

## लिखितः

## 1. तत्पदं रेखाङ्कितम् कुरुत

- क. यत् नपुंसकलिङ्गे नास्ति —  
पापकर्मणा, चरणाभ्याम्, पक्षाभ्याम्
- ख. यत् जटायोः विशेषणम् नास्ति —  
वृद्धः, सरथः
- ग. यत् रावणस्य विशेषणम् नास्ति —  
युवा, कवची, धन्वी, तीक्ष्णनखः

## 2. श्लोकांशान् मेलयत

क	ख
न तत्समाचरेद्धीरो	करुणं पापकर्मणा

चकार बहुधा गात्रे	व्याजहार शुभां गिरम्
भग्नधन्वा विरथो	बभञ्ज पतगेश्वरः
वनस्पतिगतः श्रीमान्	हताश्वो हतसारथिः
चरणाभ्यां महातेजा	यत्परोऽस्य विगर्हयेत्।
अनेन राक्षसेन्द्रेण	व्रणान् पतगसत्तमः

3. जटायुस्रावणयुद्धस्य वृत्तान्तम् अत्र एकेन बालकेन अव्यवस्थितरूपेण लिखितम्।  
एतद् व्यवस्थितं कुरुत

- क. जटायुः स्रावणस्य गात्रे तीक्ष्णखाभ्याम् व्रणान् कृतवान्।  
ख. भग्नधन्वा हतसारथिः स्रावणः भूमौ अपतत्।  
ग. जटायुः स्रावणं कथयति — वैदेहीम् आदाय कुशली न गमिष्यसि।  
घ. सीता जटायुम् साहाय्यार्थम् आह्वयति।

4. स्रावणस्य जटायोश्च विशेषणानि सम्मिलितरूपेण एकेन छात्रेण लिखितानि तानि  
पृथक्-पृथक् कृत्वा लिखत

युवा, सशरः, वृद्धः, हताश्वः, महाबलः, पतगसत्तमः, भग्नधन्वा,  
महागृध्रः, खगाधिपः, क्रोधमूर्च्छितः, पतगेश्वरः, सरथः, कवची, शरी

यथा —	स्रावणः	जटायुः
	युवा	वृद्धः

5. संधिम्/संधिविच्छेदं कुरुत

क. यथा — स + आदाय = आदाय

	हत	+	अश्वः	=	_____
	_____	+	_____	=	बभञ्जास्य
	_____	+	_____	=	अङ्गेनादाय
	तुण्डेन	+	अस्य	=	_____
	खग	+	_____	=	खगाधिपः
ख.	वृद्धः	+	अहम्	=	वृद्धोऽहम्
	शूरः	+	असि	=	_____
	_____	+	_____	=	ततोऽस्य
	सः	+	_____	=	सोऽच्छिन्नत्
	_____	+	_____	=	सोऽवदत्
	वीरः	+	_____	=	वीरोऽसि

6. 'क' स्तम्भे लिखितानां पदानां पर्यायाः 'ख' स्तम्भे लिखिताः। तान् मेलयत्

क	ख
कचची	अपतत्
आशु	पक्षिश्रेष्ठः
विस्थः	पृथिव्याम्
पपात	कवचधारी
भुवि	शीघ्रम्
पतगसत्तमः	स्थविहीनः

7. अधोदत्तायाः मञ्जूषायाः समुचितविपर्यायान् चित्वा पदानां समक्षं लिखत

मन्दम्, पुण्यकर्मणा, हसन्ती, युवा, अनार्य,  
अनतिक्रम्य, प्रदाय, देवेन्द्रेण, प्रशंसेत्, दक्षिणेन

पदानि	विपर्यायाः
क. विलपन्ती	_____
ख. आर्य	_____
ग. राक्षसेन्द्रेण	_____

घ.	पापकर्मणा	_____
ङ.	क्षिप्रम्	_____
च.	विगर्हयेत्	_____
छ.	वृद्धः	_____
ज.	आदाय	_____
झ.	वामेन	_____
ट.	अतिक्रम्य	_____

■ अधोलिखितविशेषणपदानि प्रयुज्य संस्कृतवाक्यानि रचयत

क.	_____	(तीक्ष्णतुण्डः)
ख.	_____	(शुभाम्)
ग.	_____	(कवची)
घ.	_____	(खगाधिपः)
ङ.	_____	(हत्तसारथिः)
च.	_____	(वामेन)
छ.	_____	(आयतलोचना)

योग्यताविस्तारः

क. कविपरिचयः

महर्षि वाल्मीकिः आदिकाव्यस्य रामायणस्य रचयिता। एकदा तमसातीरं गतः वाल्मीकिः एकेन व्याधेन हतं क्रौञ्चं दृष्ट्वा द्रवितचित्तो जातः। सहसा तन्मुखात् या पद्ममयी वाक् निर्गता सैव रामायणस्य बीजम्। तत् पद्यमस्ति —

मा निषाद प्रतिष्ठां त्वमगमः शाश्वतीः समाः।

यत्क्रौञ्चमिथुनादेकमवधीः काममोहितम्॥

एषः शोकः एव श्लोकरूपेण परिणतः जातः। एतद्विषये कालिदासः कथयति —

महर्षेः 'शोकः श्लोकत्वमागतः'

ख. ग्रन्थपरिचयः

रामायणं महर्षेः वाल्मीकेः प्रथमा अनुपमा च काव्यकृतिः। अस्यां कविना दशस्थानन्दनस्य श्रीरामस्य समग्रं चरितम् उपवर्णितम्। रामायणे सप्तकाण्डानि चतुर्विंशतिसहस्रं च श्लोकाः सन्ति। अत्र अनुष्टुप् छन्दसः प्राधान्यं विद्यते।

## ग. भावविस्तारः

जटायुः — अरुणस्य सम्पाती जटायुश्च द्वौ पुत्रौ आस्ताम्। जटायुः पञ्चवटीकाननस्य पक्षिणां राजा आसीत्। एकस्मिन् वृक्षे स्थित्वा अयं बुद्धिकौशलेन स्वपराक्रमेण च शासनं करोति स्म। यदा रावणः छलेन सीताम् अपाहरत्, तदा तस्याः विलापं श्रुत्वा जटायुः तस्याः रक्षणार्थं रावणेन सह युद्धमकरोत् वीरगतिं च प्राप्तवान्। एवं धर्मरक्षकत्वात् जटायुः भारतीयसंस्कृतेः महानायकः मन्यते।

## घ. जटायोः सीताविषयकसूचनाप्रदायकं वचनम् रामं प्रति

यामोषधीमिवायुष्मन्नन्वेषसि महावने।

सा च देवी मम प्राणा रावणेनोभयं हृतम्॥

## ङ. भाषिकविस्तारः

वाक्यप्रयोगाः

गिरम्	—	छात्रः मधुरां गिराम् उवाच।
खगः	—	खगः आकाशे शनैः शनैः उत्पतति।
पतगेश्वरः	—	पक्षिराजः जटायुः पतगेश्वरः अपि कथ्यते।
कवची	—	कवची नरः शत्रुप्रहाराद् रक्षितः भवति।
शरी	—	शरी रावणः निःशस्त्रेण जटायुना आक्रान्तः।
विधूय	—	वीरः शत्रुप्रहारान् विधूय अग्रे अगच्छत्।
व्रणान्	—	चिकित्सकः औषधेन व्रणान् विरोपितान् अकरोत्।
हतसारथिः	—	हतसारथिः रावणः कोपम् उपागतः।
पपात	—	वृक्षः कुठारेण छिन्नः सन् भूमौ पपात।
तुण्डेन	—	शुक्रः तुण्डेन तण्डुलान् खादन्ति।
व्यपाहरत्	—	जटायुः रावणस्य बाहुन् व्यपाहरत्।
अभिजघान	—	रामः वने अनेकान् राक्षसान् अभिजघान।
आशु	—	स्वकार्यम् आशु सम्पादय।

## च. स्त्रीप्रत्ययाः

- करुणा, दुःखिता, शुभा, नीचा, रक्षणीया
- विलपन्ती, यशस्विनी, वैदेही, कमलपत्राक्षी
- युवतिः



उपरिदत्तपदेषु प्रथमपङ्क्तौ टाप् प्रत्ययः द्वितीयपङ्क्तौ डीप् प्रत्ययः तृतीयपङ्क्तौ च ति प्रत्ययः।

पुल्लिङ्गशब्देभ्यः स्त्रीलिङ्गपदनिर्माणे टाप्-डीप्-ति-प्रत्ययाः प्रयुज्यन्ते।

एतेषु टाप् प्रत्ययस्य आ अवशिष्यते डीप् प्रत्ययस्य च ई अवशिष्यते।

### उदाहरणानि

पुल्लिङ्गम्			स्त्रीलिङ्गम्
करुण	+	टाप्	= करुणा
दुःखित	+	टाप्	= दुःखिता
शुभ	+	टाप्	= शुभा
नीच	+	टाप्	= नीचा
रक्षणीय	+	टाप्	= रक्षणीया
प्रथम	+	टाप्	= प्रथमा
मूषक	+	टाप्	= मूषिका
बालक	+	टाप्	= बालिका
अश्व	+	टाप्	= अश्वा
वत्स	+	टाप्	= वत्सा
वर्धमान	+	टाप्	= वर्धमाना
■ विलपन्	+	डीप्	= विलपन्ती
हसन्	+	डीप्	= हसन्ती
यशस्विन्	+	डीप्	= यशस्विनी
मानिन्	+	डीप्	= मानिनी
वैदेहः	+	डीप्	= वैदेही
मानुषः	+	डीप्	= मानुषी
कमलपत्राक्षः	+	डीप्	= कमलपत्राक्षी
राजन्	+	डीप्	= राज्ञी
विद्वस्	+	डीप्	= विदुषी
श्रीमन्	+	डीप्	= श्रीमती
■ युवन्	+	ति	= युवतिः

## शब्दकोशः

- अच्छिन्त् — छिद् + लङ् प्र. पु. एक. व. अकर्तयत्। काटा, काट जाता।
- अजातशिशुः — (अजातश्यासौ शिशुः, कर्मधारय पु.प्र.ए.व.) अनुत्पन्नः जातकः। उत्पन्न न हुआ बालक।
- अट्टम् — अट्ट. पु. द्वि. ए. व. अट्टालिकाम्। अटारी।
- अतिक्रम्य — अति + क्रम् + ल्यप्। उल्लंघ्य। लांघ कर।
- अद्रोहः — न द्रोहः। प्र. ए. व.। शत्रुताया अभावः, शत्रुता रहित।
- अधिरोढुम् — अधि + रुह् + तुमुन्, अव्यय, उपरिगन्तुम्, अधिरोहणं कर्तुम्। चढ़ने के लिए।
- अधीतवान् — अधि + डृङ् + क्तवत्, पु. प्र. ए. व., अध्ययनं कृतवान्। पढ़ा।
- अनन्तरूप — अनन्तानि रूपाणि यस्य सः, बहुव्री., अनेक रूपों वाले, असंख्य रूपों वाले।
- अनिकेतः — नास्ति निकेतः यस्य सः। बहुव्रीहि प्र. ए. व., वासस्थान रहितः, बेघर।
- अनुद्धताः — न उद्धता। नञ् तत्पु. पु. प्र. बहुव्री., शालीनाः। शालीन।
- अनुष्ठिते — अनु + स्था + क्त, विशे. सप्तमी ए. व.। सम्पादिते। करने पर।
- अनुद्वेगकरम् — न उद्वेगकरम्। नञ् तत्पु. प्र. एक. व.। अक्षोभकरम्, व्याकुल न करने वाले, प्ररान्न करने वाला।
- अन्तकः — अन्त + क, पु. प्र. ए. व., संहर्ता, यमराज।
- अपायः — अप + इ + अच् पु. प्र. ए. व. विघातकतत्त्वम्। विनाशक, विनाश।
- अपेयम् — न पेयम्, नञ् तत्पु. नपुं. प्र. ए. व.। पातुम् अयोग्यम्। न पीने योग्य।
- अभिलक्ष्य — अभि + लक्ष् + ल्यप्, अव्य.। विचार्य। देखकर, सोचकर

- अभिजातस्य - अभि + जन् + क्त, पष्ठी, एक. व., उत्तमकुले जातस्य, उत्तम कुल में पैदा होने वाले का।
- अभिमर्शनात् - अभि + मृश् + ल्युट्, णञ्च, एक. व.। संस्पर्शात्। छूने से, स्पर्श से।
- अभ्युदये - अभि + उत् + इण् + अच्, पु. सप्त. ए. व.। उत्थाने। उन्नति होने पर।
- अभूवम् - भू, लङ्, उ. पु. ए. व., अभवम् - मैं हुआ।
- अरिंदमः - अरि + दम् + खच् ( मुम् का आगम) शत्रुहन्ता। शत्रुओं को नष्ट करने वाला।
- अर्थितः - अर्थ + क्त, विशेष. प्र. ए. व. याचितः। मांगा।
- अवसादयेत् - अव + सद् + णिच्, विधिलिङ्, प्र. पु. एक. व., खेदयेत्। व्याकुल करे, दुःखी करे।
- अवाप्तुम् - अव + आप् + तुमुन्, अव्य.। प्राप्तुम्। पाने के लिए।
- अवाप्स्यसि - अव् + आप् + लृट् म. पु. एक. व.। प्राप्स्यसि। प्राप्त करोगे।
- आकर्ण्य - आ + कर्ण् + ल्यप्, अव्य.। श्रुत्वा। सुनकर।
- आख्याति - आ + ख्या, लट् प्र. पु. ए. व.। कथयति। कहता है।
- आञ्जनेयम् - अञ्जना + ढक्, पु. द्वि. ए. व., अञ्जनायाः पुत्रं हनुमन्तम् इत्यर्थः। अञ्जनिपुत्र हनुमान् को।
- आत्मना - आत्मन् + पु. तृ. एक. व.। स्वयमेव। स्वयम्।
- आदाय - आ + दा + ल्यप्। गृहीत्वा। लेकर
- आदिदेवः - पु. प्र. ए. व., प्रथमः देवः। पहला देवता।
- आरम्भगुर्वी - आरम्भे गुर्वी, सप्त. तत्पु. स्त्री. प्र. ए. व.। आरम्भकाले महती। आरंभकाल में बड़ी।
- आलापः - आ + लप् + घञ्, पु. प्र. ए. व., वार्तालापः, बातचीत।
- उच्यते - ब्रू-वच् + यक्, प्र. पु. ए. व., कर्मवाच्य, कथ्यते। कहा जाता है।
- उद्भ्रान्तः - उद् + भ्रम् + क्त, विशेष., पु. प्र. ए. व.। पथभ्रष्टः। भ्रमित।
- उद्धृत्य - उत् + हृ + ल्यप्। उत्थाप्य। उठाकर।

- उद्धरेत् - उत् + ह्र. विधि. प्र. पु. एक. व.। उत्थापयेत्। उद्धार करे, उठाए।
- उन्मीलितम् - उत् + मील + क्त, विशे. नपुं. प्र. ए. व., उन्मेषितम् खुला हुआ (आँख)
- उपायः - उप + इ + अच् पुं. प्र. ए. व., साधनम्। साधन, तरीका
- उपैति - उप + इण्, लट् प्र. पु. ए. व., प्राप्नोति, समीपं गच्छति। प्राप्त करता है, समीप जाता है।
- एधेते - एध्, आत्म., लट् प्र. पु. द्वि. व.। वर्धते। दो बढ़ते हैं।
- कल्लोलोच्छलन- कल्लोलानाम् उच्छलनं कल्लोलोच्छलनं तस्य ध्वनिः, ष. तत्पु., पुं. प्र. ध्वनिः ए. व. ध्वनिः। तरङ्गोच्छलनस्य शब्दः। लहरों की आवाज।
- कवची - कवचः अस्ति अस्य इति, कवचधारी। कवच पहना हुआ व्यक्ति।
- कारणं कारण - हेतूनां ये हेतवः तेषामपि हेतुः, मूलभूतो हेतुः इत्यर्थः।
- कारणानाम् कारणों का कारण।
- कुक्षी - कुक्षि, पु. स. ए. व.। गर्भे। गर्भ में।
- कुटुम्बिभिः - कुटुम्बिन्, पु. तृ. ब. व.। परिवारजनैः। परिवार के लोगों द्वारा।
- कुलक्रमादागत - कुलस्य क्रमः कुलक्रमः, कुलक्रमात् आगतः कुलक्रमादागतः, विशे., वंशपरम्परातः सम्प्राप्तः। वंशपरम्परा से प्राप्त।
- कुर्वाणम् - कृ + शानच्, पुं. द्वि. ए. व.। कुर्वन्तम्। काम करते हुए व्यक्ति को।
- क्लेदयन्ति - क्लिद् + णिच्, लट् प्र. पु. ब. व.। खेदयन्ति। गीला करते हैं, पसीने से नहाते हैं।
- क्लेशयमानः - क्लिश् + णिच् + यक् + शानच्, पुं. प्र. ए. व.। सन्ताप्यमानः। कष्ट उठाता हुआ।
- खगाधिपः - खगानाम् अधिपः, ष. तत्पु.। पक्षिराजः। पक्षियों का राजा।
- खरः - खरो नाम राक्षसः, दूषणस्य भ्राता। दूषण का भाई, खर नामक राक्षस।
- खलसज्जनानाम् - खलाः च सज्जनाः च खलज्जनाः तेषाम्, पुं. ष. ब. व.। दुष्टानां सत्पुरुषाणां च। दुर्जनों एवं सज्जनों का।
- गच्छतः - गम् + शतृ, वि. पुं., ष. ए. व.। चलतः। जाते हुए का।

- गतस्पृहाः** — गता स्पृहा येभ्यः ते, बहुव्री., पुं. प्र. ब. व. निष्कामाः, इच्छा रहिताः।  
ऐसे व्यक्ति जिनकी इच्छाएं समाप्त हो गई हों।
- गमिष्यसि** — गम् + लृट्, म. पु. ए. व.। यास्यसि। जाओगे।
- गर्हितः** — गर्ह् + क्त, वि. पु. प्र. ए. व.। निन्दितः। निंदनीय।
- गिरिनिर्झराः** — गिरीणां निर्झराः, ष. तत्पु. पुं. प्र. ब. व., पर्वतानां प्रपाताः। पहाड़ी झरने।
- गुह्यम्** — गुह् + यत्, नपुं., प्र. ए. व.। गोपनीयम्, रहस्यम्। गोपनीय।
- गोपालकाः** — गवां पालकाः, ष. तत्पु., पुं. प्र. ब. व. गोचारकाः। गौ चराने वाले, गौ का पालन करने वाले।
- चन्द्रोज्ज्वलाः** — चन्द्र इव उज्ज्वलाः, कर्मधारय, पुं. प्र. ब. व.। चन्द्रवत् शुभ्राः। चन्द्रमा के समान सफेद।
- छिन्दन्ति** — छिद् + लट्, प्र. पु. ब. व.। विदारयन्ति। छिन्न भिन्न कर काटना।
- जनजागरणाय** — जनानां जागरणाय, ष. तत्पु., नपुं. च. ए. व.। जनानां प्रबोधनाय। लोगों में जागृति पैदा करने के लिए।
- जन्मसिद्धः** — जन्मना सिद्धः, तृ. तत्पु., विशेष., पुं. प्र. ए. व., जन्मतः एव प्राप्तः। जन्म से प्राप्त।
- जयाजयौ** — जयश्च अजयश्च तौ जयाजयौ। द्वन्द्व समास, विजयपराजयौ। जीत और हार।
- जलप्लावनैः** — जलस्य प्लावनैः, ष. तत्पु., नपुं. तृ. ब. व.। जलौघैः। बाढ़।
- जलोच्छलनध्वनिः** — जलस्य उच्छलनं जलोच्छलनं तस्य ध्वनिः, ष. तत्पु., पुं. प्र. ए. व.। जलोर्ध्वगते शब्दः। पानी के उछाल की आवाज।
- जहाति** — हा त्यागे, लट्, प्र. पु. ए. व.। त्यजति। छोड़ता है।
- ज्ञातिजनैः** — ज्ञातेः जनैः, ष. तत्पु. स., पुं. तृ. ब. व.। बन्धुबान्धवैः। जाति-बिरादरी वाले, रिश्तेदारों द्वारा।
- ततम्** — तन् + क्त, नपुं. प्र. ए. व.। विस्तृतम्, व्याप्तम्। फैलाव।

- तथाविधम् — तथा विधा यस्य सः तम्, बहुव्री. सः, पुं. द्वि. ए.व. तादृशम्। उस तरह, उस प्रकार।
- तपश्चर्याया — तपसः चर्या तथा, ष. तत्पु. स्त्री. तृ. ए. व., तपश्चरणेन। तपस्या करने, के द्वारा।
- तपस्यारतः — तपस्यायां रतः, सप्त. तत्पु., पु. प्र. ए. व.। तपश्चरन्। तपस्या में लीन।
- तिष्ठ — स्था + लोट्, म. पु. ए. व.। ठहरो।
- तुण्डेन — तुण्ड, तृ. ए. व.। चञ्च्वा। चोंच द्वारा।
- दग्ध्वा — दह् + क्त्वा, अव्य., भर्ज्जनं कृत्वा। जलाकर।
- दीयते — दा + यक्, प्र. पु. ए. व.। प्रदीयते। दिया जाता है।
- दुःखहा — दुःखं हन्ति इति। दुःख + हन् + क्विप्, प्र. ए. व., दुःखनाशकः। दुःख नाश करने वाला।
- दुर्बुद्धिः — दुष्टा बुद्धिर्यस्य सः, बहुव्री. पुं. प्र. ए. व.। दुर्मतिः। दुष्ट बुद्धि वाला।
- दूरविलम्बिनः — दूरं विलम्बिनः, पुं. प्र. ब. व.। नीचैः आगता। दूर लटके हुए। दूर ऊपर से नीचे आने वाले
- देवायत्तनम् — देवानाम् आयत्तनम्, ष. तत्पु., नपुं. प्र. ए. व.। देवालयः, मन्दिरम्, मंदिर, देवता का घर
- देशभक्तः — देशस्य भक्तः, ष. तत्पु., पुं. प्र. ए. व.। राष्ट्रप्रेमयुक्तः। देशभक्त।
- धन्वी — धन्वं अस्ति अस्य इति। धन्व + इनि। धनुर्धरः। धनुष धारण करने वाला।
- धीवरैः — पुं. तृ. ब. व.। मत्स्यजीविभिः। मछुआरों के द्वारा
- धृतिः — धृ + क्तिन्, प्र. ए. व.। धैर्यम्। धैर्य।
- नगेन्द्रः — नगानाम् इन्द्रः, ष. तत्पु., पुं. प्र. ए. व.। पर्वतराजः। पर्वतों का राजा।
- नवाम्बुभिः — नवानि अम्बूनि नवाम्बूनि, तैः, कर्मधारय, नपुं. तृ. ब. व.। नूतनजलैः। ताजा जल से।
- निक्षिप्तः — नि + क्षिप् + क्त, विशे. पुं. प्र. ए. व., न्यस्तः। फेंका हुआ, रखा हुआ।

- निर्गन्धाः** — निर्गतः गन्धः येभ्यः ते, बहुव्री. विशेषे., पुं. प्र. ए. व. गन्धरहिताः। गन्ध से रहित। बिना खुशबू वाले।
- निगूहति** — नि + गुह्, लट्, प्र. पु. ए. व.। गोपयति। छिपाता है।
- निःश्वस्य** — निः + श्वस् + ल्यप्, अव्य., श्वासं गृहीत्वा। लम्बी साँस लेकर।
- निवर्तय** — नि + वृत्, लोट्, म. पु. ए. व.। निवृत्तां कुरु। वापस करना, लौटाना।
- नीयते** — नी + यक्, आत्मने, लट्, प्र. पु. ए. व.। उह्यते। ले जाया जाता है।
- नीयमानम्** — नी + यक् + शानच्, विशेषे., पु. द्वि. ए. व.। उह्यमानम्। ले जाते हुए को।
- पक्त्वा** — पच् + क्त्वा, अव्य.। पाकं कृत्वा। पकाकर।
- पक्षबलेन** — पक्षाणां बलेन, ष. तत्पु. नपुं. तृ. ए. व., पक्षशक्त्या। पंखों की ताकत से।
- पतगसत्तमः** — पतगेषु सत्तमः। सप्त. तत्पु.। पक्षिश्रेष्ठः। पक्षियों में श्रेष्ठ।
- पपात** — पत् + लिट्, प्र. पु. ए. व.। पतितः। गिरा था।
- पयोमुखम्** — पयः मुखे यस्य तम्, बहुव्री., विशेषे., नपुं. द्वि. ए. व. मुखे दुग्धयुक्तम्। दूध से युक्त मुँह वाले।
- पराधीनैः** — परेषाम् अधीनैः, ष. तत्पु. पुं. तृ. व.। परतन्त्रैः। दूसरे के अधीन व्यक्तियों द्वारा।
- परोपकारैकाधियः** — परेषाम् उपकारे एका धीर्येषाम् ते, तत्पु. विशेषे. प्र. बहु. व.। परहितबुद्धयः। दूसरों का भला चाहने वाले।
- पारतन्त्र्यम्** — परतन्त्र + ष्यञ्, नपुं. प्र. ए. व.। पराधीनता। परतंत्र।
- पारतन्त्र्यदुःखम्** — पारतन्त्र्यस्य दुःखम्, ष. तत्पु. नपुं. द्वि. ए. व.। पराधीनतायाः क्लेशम्। पराधीनता का कष्ट।
- प्रकटीकरोति** — प्रकट + च्चि + करोति, लट्, प्र. पु. ए. व.। अप्रकटं प्रकटं करोति। समक्ष प्रकट करता है।

- प्रकृतिसिद्धम्** — प्रकृत्या सिद्धम्, तृ. तत्पु., नपुं. प्र. ए. व.। स्वभावेन एव सिद्धम्। स्वाभाविक गुण।
- प्रखरबुद्धिः** — प्रखरा बुद्धिर्धस्य, सः बहुव्री., पुं. प्र. ए. व., तीव्र बुद्धिः। तीक्ष्ण बुद्धिवाला।
- प्रथितम्** — प्रथ् + क्त, विशेष., नपुं. प्र. ए. व.। प्रसृतम्। प्रसिद्ध।
- प्राणिति** — प्र. + अन्, लट्, प्र. पु. ए. व.। श्वसिति। साँस लेता है।
- पितृचरणैः** — पितुः चरणैः, ष. तत्पु. पु. तृ. बहु. व., पितृपादैः। पिता द्वारा।
- प्रीणयन्तः** — प्रीण + णिच् + शतृ, पुं. प्र. बहु. व.। तर्पयन्तः। प्रसन्न करते हुए।
- पुण्यपीयूषपूर्णाः** — पुण्यपीयूषम्, तेन पूर्णाः, तृ. तत्पु., पुं. प्र. बहु. व., पुण्यामृतेन सहिताः। पुण्यरूपी अमृत से पूर्ण।
- पुराणः** — विशेष., पुं. प्र. ए. व., सनातनः, पुरातनः। प्राचीन, पुराना
- पुष्पाति** — पुष्, लट्, प्र. पु. ए. व.। पोषणं करोति। पोषण करता है।
- फलोद्गमैः** — फलानाम् उद्गमैः, ष. तत्पु. पुं. तृ. बहु. व.। फलानाम् उत्पत्तिभिः। फलों के आने से।
- बभञ्ज** — भञ्ज् + लिट्, प्र. पु. ए. व.। भग्नं चकार। तोड़ा।
- बाहुल्येन** — बहुल + ष्यञ्, नपुं. तृ. ण. त.। प्राचुर्येण। अधिकता से, प्रचुर मात्रा के कारण।
- भग्नधन्वा** — भग्नं धनुः यस्य, बहुव्री. स.। नष्टधन्वा। टूटे हुए धनुष वाला।
- भ्रान्तः** — भ्रम् + क्त, विशेष., पुं. प्र. ए. व. भ्रमयुक्तः। भ्रमित बुद्धि वाला व्यक्ति।
- भुवि** — भू-सप्त. ए. व.। पृथिव्याम्। पृथ्वी पर, भूमि में।
- (भूमौ)शयिष्यसे** — शीङ् + लृट्, म. पु., ए. व.। पृथिव्यां पतिष्यसि। जमीन पर सोओगे, गिरोगे।
- मन्तव्यः** — मन् + तव्यत्, विशेष., पुं., प्र. ए. व.। स्वीकरणीयः। विचार, मत।
- मूर्धजाः** — मूर्धन् + जन् + ड, मूर्ध्नि जायन्ते इति मूर्धजाः। पुं. प्र. बहु. व.। केशाः। सिर के बाल।



- यन्त्रागाराणाम् — यन्त्राणाम् आगाराणि तेषां, ष. तत्पु., नपुं., ष. बहु. व.। यन्त्रालयानाम्।  
यन्त्रों के घरों का।
- युक्तस्वप्नाव — स्वप्नश्च अवबोधश्च — स्वप्नावबोधौ। युक्तौ स्वप्नावबोधौ यस्य, तस्य।  
बोधस्य — बहुव्री. स.। नियमितशयनजागरणस्य। जिसकी नींद एवं जागरण नियमित हो।
- युक्तचेष्टस्य — युक्ताश्चेष्टा यस्य, तस्य। बहुव्री. स.। ष. ए. व.। नियमितक्रियस्य।  
जिसकी क्रियाएं नियमित हों।
- युक्ताहार — युक्तः आहारो विहारश्च यस्य, तस्य। बहुव्री. स.। पष्ठी. ए. विहारस्य व.।  
नियमितक्रियाकलापस्य। ऐसे व्यक्ति का जिसका आहार विहार संतुलित हो।
- युज्यस्व — युज् + लोट्, म. पु. ए. व.। प्रवृत्तो भव। तुम तैयार रहो।
- युध्यस्व — युध् + लोट्, म. पु. ए. व.। युद्धं कुरु। युद्ध करो।
- रामस्यार्थे — रामस्य कृते। राम के लिए।
- रुणत्सि — रुध्, लट्, म. पु. ए. व.। निवारयसि। रोकते हो।
- रौद्रकर्मणा — रौद्रं कर्म यस्य स रौद्रकर्म, तेन रौद्रकर्मणा, तृ. ए.व.। घोरकृत्येन।  
भयंकर कर्म द्वारा।
- लाभालाभौ — लाभश्च अलाभश्च तौ लाभालाभौ। द्व. स.। लाभ एवं हानि।
- लोकमङ्गला- — लोकस्य मङ्गलं लोकमङ्गलम्, तस्य आशंसिनः, ष. तत्पु., पुं. प्र. बहु. व.।  
शंसिनः समाजकल्याणकामाः। समाज का भला चाहने वाले।
- वञ्चनम् — वञ्च् + ल्युट्, नपुं. प्र. ए. व.। प्रवञ्चना, ठगी।
- व्रणान् — व्रण-द्वि. ब. व., क्षतानि। घाव।
- वात्याचक्रैः — वात्यानां चक्रैः, ष. तत्पु., नपुं. तृ. ब. व.। वातचक्रैः। झंझावात, अन्धड़।
- वाङ्मयम्(तपः) — वाक् + मयट्, नपुं. प्र. ए. व.। वाण्याः तपः। वाणी का तप (संयम)
- विगर्हयेत् — वि + गर्ह्, विधिलिङ्, प्र. पु. ए. व.। निन्देत। निंदा करे।

- विदधत् - वि + धा + शतृ, विशे। कुर्वतः। करते हुए।
- विभक्त्ये - वि + भज् + क्त, विशे. पुं. स. ए. व.। विभाग युक्ते। विभाजित होने पर।
- विमृश्य - वि + मृश् + ल्यप्, अव्य.। विचार्य, विचार कर।
- विरथः - विगतो रथो यस्य। बहुव्री. स.। रथविहीनः। रथ से रहित।
- व्यापाहरत् - वि + अप् + आ + ह। लङ्. प्र. पु. ए. व.। उत्खातवान्। दूर करना, हरण करना।
- व्यापादयितव्या - वि + आ + पद् + णिच् + तव्यत्, विशे., पुं. प्र. बहु. व.। मारयितव्याः। मारने योग्य व्यक्ति
- वीचिवत् - वीचि + वत्। तरङ्गवत्। लहरों से युक्त, लहरों की तरह
- वेत्ता - विद् + तृच्, विशे. पुं. प्र. ए. व.। ज्ञाता-जानकार।
- वेद्यम् - विद् + यत्, विशे. नपुं. प्र. ए. व.। ज्ञातुं योग्यम्। जानने योग्य।
- वैदेहीम् - विदेहस्य अपत्यं, स्त्री. वैदेही, तां वैदेहीम्, द्वि. ए. व., सीताम्। सीता को।
- वैदुष्यम् - विद्वस् + ष्यञ्, नपुं. द्वि. ए. व.। पाण्डित्यम्। विद्वत्ता।
- वृक्षकर्तृनात् - वृक्षाणां कर्तृनां वृक्षकर्तृनाम् तस्मात्। ष. तत्पु. नपुं. प्र. ए. व.। वृक्षाणाम् उच्छेदात्। वृक्षों के कटने से।
- वृत्तिः - वृत् + क्तिन्, स्त्री. प्र. ए. व.। जीविका, जीवन का साधन
- शरी - शरः अस्ति, अस्य इति। शरयुक्तः। तीर लिए हुए।
- शौचम् - शुच् + अण्, प्र. ए. व., पवित्रता। स्वच्छ। सफाई।
- श्रोत्ररसायनम् - श्रोत्रयोः रसायनम्, ष. तत्पु., नपुं. प्र. ए. व.। कर्णामृतम्। कानों के लिए सुखकर।
- सदसि - सदस्, नपुं. स. ए. व., सभायाम्। सभा में।
- सन्मित्रलक्षणम् - सद् मित्रं सन्मित्रम् तस्य लक्षणम्, ष. तत्पु. नपुं. प्र. ए. व., श्रेष्ठमित्रस्य लक्षणम्। अच्छे मित्र के लक्षण।

- समत्वभावना — तेषां भावना, ष. तत्पु. स्त्री. प्र. ए. व., प्रेम्णः परस्परं सहकारित्वस्य समत्वस्य च भावः। प्रेम, परस्पर सहयोग एवं समानता की भावना।
- समाचरेत् — सम् + आ + चर, वि. लि., प्र. पु. ए. व.। आचरणं कुर्यात्। आचरण करे।
- सविर्मशम् — विमर्शेन सह सविमर्शम्, तद् यथा स्यात्तथा अव्य, विचार पूर्वकम्। विचारपूर्वक।
- सवैलक्ष्यम् — वैलक्ष्येण सह सवैलक्ष्यम्, तद् यथा स्यात्तथा, (अव्य) सलज्जाम्। लज्जा से युक्त।
- सशरम् — शरेण सहितम्, बाणसहितम्। बाणों के साथ
- सहासम् — हासेन सह सहासम् तद् यथा स्यात् तथा। अव्य., सस्मयम्। मुस्कराहट के साथ।
- सम्भ्रमः — सम् + भ्रम् + घञ्, पुं. प्र. ए. व., समादरः सम्मानजन्य घबराहट — हड़बड़ी।
- संस्कृता — सम् + सुट् (स) + कृ + क्त, संस्कृत + टाप्, स्त्री. प्र. ए. व., परिष्कृता, भूषिता। संस्कार युक्त स्त्री व व्यक्ति।
- सहस्रकृत्वः — सहस्रवारम्, अनेकशः। हजार बार — अनेकों बार।
- स्थलमलाप- — स्थलानां मलं स्थलमलम् तस्य उपनोदिनः, ष. तत्पु., पु. प्र. व. व.।
- नोदिनः — भूमिमलापसारिणः। पृथ्वी के मल को दूर करने वाले।
- स्थावरजङ्घ- — स्थावराणिजङ्गमानि चेति स्थावर जङ्गमानि तेषाम्। चराचराणाम्, जड़चेतनानाम्।
- मानाम् — जड़ और चेतन का।
- स्थिरमतिः — स्थिरा मतिर्यस्य सः। बहुव्री. स, निश्चलबुद्धिः। दृढ़ मति वाला व्यक्ति।
- स्थीयताम् — स्था + यक्, लोट्, प्र. पु. ए. व.। अवस्थानं क्रियताम्। रुकिए, बैठिए।
- स्नेहसहयोग- — स्नेहश्च सहयोगश्च समत्वं च इति स्नेह सहयोगसमत्वानि।
- स्वसङ्कल्पसा- — स्वस्य सङ्कल्पः स्वसङ्कल्पः तस्य सातत्येन, ष. तत्पु. स., नपुं. वृ. ए. व.,
- तत्येन — स्वचिन्तनपरम्परया। अपने संकल्पों की निरंतरता से।

- साट्टहासम्** — अट्टहासेन सह साट्टहासम्, तद् यथा स्यात्तथा। अव्य. अट्टहासपूर्वकम्—  
जोर से हँसना, खुलकर हँसना।
- सात्त्विकम्** — सत्त्व + ठञ्, नपुं. प्र. ए. व., सत्त्वगुणयुक्तम्। अच्छाईयुक्त
- सिकता** — स्त्री. प्र. ए. व., वालुका, रेत
- सुखदुःखे** — सुखं च दुःखं च ते — सुखदुःखे, द्व. स.। सुख और दुःख।
- सुहृदाम्** — सुहृत्, पुं., ष. ब. व., मित्राणाम्। मित्रों का।
- सूक्ष्मदृष्टिः** — सूक्ष्मा दृष्टिर्यस्य, बहुव्री. पुं. प्र. ए. व.। विवेकपूर्णदृष्टिः। पैनी नजर,  
बारीकी से देखना।
- हतसारथिः** — हतः सारथिर्यस्य, बहुव्री. स.। हतसूतः। जिसका सारथि नष्ट हो गया हो।
- हताश्वः** — हता अश्वा यस्य, बहुव्री. स.। नष्टतुरगः। जिसका घोड़ा नष्ट हो गया है।
- हतोत्साहेषु** — हतः उत्साहः येषां, तेषु, बहुव्री. स., नपुं. स. वि., ब. व.। उत्साहहीनेषु।  
उत्साहरहित व्यक्तियों में।
- हिमवान्** — हिम + मतुप्, पुं. प्र. ए. व.। हिमालयः। हिमालय।
- हेतुफले** — हेतुः फलं च इति हेतुफले, द्व. स., नपुं., द्वि., वि. द्वि. व., कारणं कार्यं  
च। कारण एवं फल।
- हृदम्** — हृद्, पुं. द्वि. ए. व.। जलाशयम्। तालाब।
- द्वियमाणाम्** — ह् + यक्, शानच्, स्त्री., नीयमानाम्। ले जायी जाती हुई को।





GROUP I.

VOLUME II  
ABSTRACT-589

INTERACTION ANALYSIS, MICROTACHING AND  
MODIFICATION OF TEACHER CLASSROOM BEHAVIOUR,  
PH.D. EDU., MSU, 1974.

(Author: L.P. Singh)

The major objectives of the study were: (i) to study the effectiveness of microteaching vis-a-vis conventional method of training as a means of changing classroom behaviour of student teachers; (ii) to study the effectiveness of training in Flanders Interaction Analysis Category System (FIACS) vis-a-vis conventional programme as a means of changing classroom behaviour of student teachers; and (iii) to study the effectiveness of microteaching vis-a-vis training in Flanders Interaction Analysis Category System (FIACS) as a means of changing classroom behaviour of student teachers. In order to fulfil the objectives, the following null hypotheses were framed: (i) student teachers trained by micro-teaching do not significantly differ in their verbal teaching behaviour in the classroom as compared to the student teachers trained by a conventional pattern; (ii) student teachers trained in FIACS do not significantly differ in their verbal teaching behaviour in the classroom as compared to the student teachers trained by traditional way only; (iii) student teachers trained by microteaching do not significantly differ in their verbal teaching behaviour in the classroom as compared to the student teachers trained in FIACS. Two sets of samples were used, one for the pilot study and the other for the final experiment. A sample of twenty student teachers for pilot study was drawn out of 160 student teachers admitted for B.Ed. training in the year 1970-71 in Tilakdhari College, Jaunpur, affiliated to the University of Gorakhpur, Uttar Pradesh. A sample of twenty student teachers for the final experiment was selected out of 157 student teachers admitted to the same college in the year 1971-72 for B.Ed. training. The experimental class, in both experiments was VIII grade. Pupils numbering

ninety and 105 in the year 1970-71 and 1971-72 respectively, from the school attached to Tilakdhari Singh Inter College, Jaunpur, were used. For gathering information relating to the matching variable an information proforma was prepared and administered to the student teachers under training. For training the student teachers, the traditional method as practised today, micro-teaching and FIACS were used for different groups. Teacher behaviour was measured by observing and analysing the classroom verbal interaction of student teachers and pupils using FIACS.

The major findings of this study were: (i) student teachers trained through microteaching significantly changed their verbal teaching behaviour in the classroom compared to the student teachers trained in traditional way only; (ii) student teachers trained in FIACS changed their verbal teaching behaviour in the classroom significantly compared to the student teachers trained in traditional way only; (iii) student teachers trained through microteaching changed their verbal behaviour in the classroom significantly compared to the student teachers trained in FIACS.



GROUP II

VOLUME II  
ABSTRACT-689

WASTAGE AND STAGNATION IN PRIMARY EDUCATION  
AMONGST THE TRIBALS OF GUJARAT, TRIBAL  
RESEARCH AND TRAINING INSTITUTE, GUJARAT  
VIDYAPITH, AHMEDABAD, 1971.

(Author: M.I. Masavi)

The major objectives of the study were: (i) to ascertain the nature and extent of the problem of wastage and stagnation in tribal areas of the state; (ii) to identify the causes responsible for it; and (iii) to suggest appropriate remedial measures.

The sample consisted of 104 schools and fourteen ashram schools belonging to the fifteen tribal development blocks in the eight tribal districts of the State of Gujarat. Students who joined in class I in the years 1967 and 1968 were followed for four years for measuring the extent of wastage and stagnation. Besides this, the techniques used for data collection included individual and group interviews of (i) local leaders, (ii) parents, (iii) teachers, and (iv) educational inspectors.

Main findings of the study were: (i) the rate of wastage in the two selected base years of 1967 and 1968 was forty-nine percent and thirty-four percent respectively; (ii) first grade was found to be stumbling block in the sphere of primary education; (iii) the rate of stagnation was high in the first grade; (iv) ashram schools showed lower rate of wastage than panchayat schools; (v) economic backwardness was found to be the primary cause for wastage and stagnation; and (vi) other causes for wastage and stagnation were found to be illiterate parents, untrained and inefficient teachers, unsuitable curriculum and medium of instruction, and nonstimulating school environment.



Group-II

Volume-III

Abstract-102

A STUDY OF GROUP STATUS IN RELATION TO  
SCHOOL ACHIEVEMENT AS REVEALED BY A SOCIO-  
METRIC TEST, GUJARAT

(Author - Badami, H.D. & Badami, C.H., Guj. 1975)

The main aim of the inquiry was to make a comparative study of the group status of the high ranked and the low ranked pupils among the junior high schools of Ahmedabad and to determine the amount and kind of relationship that existed between the group status of an individual pupil and his school achievement.

The tool used was a sociometric test suitable for the high school status. The sample comprised two groups, each of sixty five, of high ranked and low ranked pupils drawn from classes V, VI and VII of four schools. Chi-square and contingency coefficients were computed for data analysis.

The main findings were: (i) The sociometric scores and the degree of peer group acceptance-rejection were found to be positively related with school achievement. Larger number of high ranked pupils were accepted by their peers than the pupils in the low ranked group. (ii) The degree of group acceptance-rejection was positively related with two levels of school achievement. Relatively larger number of pupils belonging to the high ranked group were accepted by their peers than the low ranked group. A larger number of pupils coming from the low ranked group were rejected by their peer groups. (iii) Negligible relationship appeared to exist between the number of pupils chosen and the different levels of school achievement. (iv) The number of choices exercised by pupils was found to be independent of the school achievement. (v) There was no relationship found between the incidence of mutual choice and the level of school achievement. (vi) School achievement played a doubtful role in determining the group status of an individual pupil among his peers.



Group-II

Volume-III  
Abstract-185

WASTAGE AND STAGNATION IN PRIMARY EDUCATION  
IN TRIBAL AREAS, TRIBAL RESEARCH AND TRAINING  
INSTITUTE

(Author - Masavi, M., Guj. Vidyapeeth, Ahmedabad, 1976)

The main objectives of the investigation were: (i) to find out the nature and extent of wastage and stagnation at the stage of primary education in the tribal areas of Gujarat State, (ii) to identify the causes responsible for the existing conditions with a regard to wastage and stagnation, and (iii) to suggest appropriate measures to remedy the problems of wastage and stagnation.

The sample for the study was drawn from each of the eight tribal districts of Gujarat. Two tribal blocks were selected from each district on the basis of literacy rate, one having the highest literacy rate and the other the lowest. From each of these blocks 10 per cent of the schools which provided instruction up to the fourth standard were selected on a stratified random basis. Altogether 104 schools were selected from these blocks. Apart from these, one ashram school from each of these blocks was also selected. For collecting data about wastage and stagnation, attendance registers and result sheets of each year of the selected schools were examined. To collect data for identifying the causes of wastage and stagnation a brief questionnaire was circulated among the teachers. Besides this, focussed individual and group interviews of local leaders, parents, teachers and educational inspectors were conducted to ascertain their views about the problems and their possible remedies.

The major findings of the study were: (i) Considering the overall figures, the rate of wastage in the tribal areas during the first four years of schooling was to the tune of 65 per cent. Actually, however, only 9.1 per cent of the total number enrolled in Standard I had been able to complete Standard IV. (ii) Standard I was found to be the weakest point in the sphere of tribal education. In fact, the rate of wastage at this stage was 69.6 per cent for the cohort of 1966-67 (to 1969-70) and 61.2 per cent for 1967-68 (to 1970-71). (iii) combined

rates of wastage and stangation in all the fiftenn blocks were 83.6 per cent and 84.9 per cent, respectively, for the two reference cohorts. (iv) Wastage was greater among girls than among boys in almost all the blocks. (v) The rates of stagnation in Standard I were 51.7 per cent and 43.3 per cent for the two reference cohorts indicating that the rate of stagnation was very high in Standard I. (vi) In Standards II, III and IV stagnation became considerably reduced. For instance, for the second cohort the rates of Stagnation in Standards II, III and IV were 20.5 per cent, 6.0 per cent and 0.7 per cent, respectively. (vii) The overall wastage in all the ashram schools was 51.8 per cent and 41.6 per cent for the two reference cohorts. Further, the percentages of the students who could complete Standard IV from the two cohorts were 24 and 30 respectively which were much higher than the corresponding figures for other schools. (viii) Wastage and stagnation did not occur in the ashram schools to the same extent as it did in other schools, the reasons being the board and lodging facilities and personal attention given to each student in ashram schools. (ix) Main causes for wastage and stagnation were, by and large, socio-economic conditions, ignorance among tribal parents, ill-equipped teachers, teaching in alien languages physical illness, and inappropriate curricula.

Group-I

Vol.III

Abstract-681

COMPARATIVE FACTORIAL STRUCTURE OF RAVEN'S  
STANDARD PROGRESSIVE METRICES, CATELL'S CULTURE  
FAIR SCALE 3 AND DESAI BHATT GROUP TEST OF  
INTELLIGENCE ON SAMPLES OF VARIOUS SUB CULTURES  
OF GUJARAT. GU. U

(Author- Desai E.G.)

The main objectives of the investigation was to compare the performance of different sub-culture of Gujarat on Raven's Standard Progressive Matrices, Cattell's Culture Fair Scale 3, Desai-Bhatt Verbal Group Test of intelligence and Bhavasar Non-verbal Group test of intelligence. The sub-culture were 'big urban, small urban, semi urban, rural advanced, rural backward, rural muslim, tribal, tribal institutional.'

Eight schools, one from each sub-culture, was selected and one division of standard VIII was selected from each school randomly. The entire division was administered the tests which made it a cluster sample. The sample comprised 338 pupils. The four tests mentioned earlier were the tools used. Product moment coefficient of correlations and factor analysis by the principal factor method alongwith varimax rotation were the statistical techniques used for data analysis.

The major findings were:-

- (i) Girls' average scores in all subcultures were lower than those of boys in the respective subcultures but on Cattell's Culture Fair Scale 3, they were not much different.
- (ii) The mean scores of boys and girls showed progressive decrease from big urban to semi urban, rural and tribal subculture with only one exception that the rural advanced sub culture showed better average than the semi-urban groups.
- (iii) Because of low norms on the Cattell's Culture Fair Scale, the score of comparability among various samples was very much reduced. Thus the Cattell's Culture Fair Scale 3 did not prove more useful.

prove useful than the verbal and non-verbal tests used in the investigations.

- (17) The difference in average scores of the verbal test of intelligence were found to be more pronounced than those of Raven's and Cattell's tests supporting Cattell's finding that crystalized intelligence assessed by verbal tests showed greater cultural differences compared to fluid intelligence assessed by culture fair tests.
- (v) Five factors were identified viz. G. factor, Verbal factor V, Deeper Reasoning, Perception of Relationship and Manipulation of Correlates.



Group-II

Vol.III  
Abstract-713

CLASSIFICATORY ABILITY OF SIX TO TEN YEAR OLD  
CHILDREN

(Author S.S. Pandey-MSU, 1980 )

Objectives of the study were (i) to explore the classificatory ability of six to ten year old Rajasthan rural children, (ii) to find out the effects of sex, socio-economic status (SES), intelligence, age and grade on classificatory ability, (iii) to study the invariant stage sequence in the development of classificatory skills (iv) to factor analyse the test of classificatory ability.

The sample consisted of 400 children (200 boys and 200 girls) of age group 6 to 19 (80 each of age level) selected at random from schools located in six districts representing the entire state. The tools and research were drawn - a Man test of Phatak SES scale of Pareek and Trivedi and classificatory ability test (based on Piaget's theory) developed by the investigator. The test converted tasks that required to demonstrate their understanding of each of the classificatory operators by correctly manipulating a set of geometrical blocks. The statistical analysis included a univariate frequency distribution of all variables, t-test, inter-correlation matrix for the thirtytwo dependent variables and factor analysis by principal component method.

The major findings were (i) Classificatory ability was independent of sex and SES. (ii) Classificatory ability was dependent on intellectual level of children. Children of higher intellectual level were found to be significantly better than children of lower intellectual level in their classificatory ability. (iii) Children of higher age did better on classification tasks than children of lower age. (iv) Children of higher grade did better than children of lower grades on classification tests.

(v) Classification ability scores were positively related with achievement scores in Hindi, Science, mathematics and overall achievement.

(vi) Invariant stage sequence contended by piaget was partially susbtained because children who failed in simple tasks, frequently passed in logically complex tasks. (vii) The predicted difficulty level of the tasks was different from that found by a piaget and kofaky as only 7.00 percent subjects passed class inclusion task. 8.04 percent passed the whole task and 11.29 percent passed the multiple class membership tasks. (viii) Majority of the children sorted the objects on the basis of colour (254 subjects out of 311). Only thirteen out of 311 sorted on the basis of size. (ix) A large number of children preferred red and blue colour instead of green were named as multiple Class Membership. Some and All sorting and Inclusion factors.

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Group-I

Vol.III  
Abstract-742

A TEACHING STRATEGY FOR DEVELOPING APPROPRIATE SKILLS  
REQUIRED IN STUDENTS FOR CONDUCTING SCIENTIFIC  
INVESTIGATIONS.

(Author - K. Adinarayan, Ph.D.Edu., MSU, 1979)

Objectives of the study were:-

- (i) To develop competence criteria for the skills in operational terms,
- (ii) to construct learning packages suitable for average children in ordinary classroom situation,
- (iii) to determine the advantages and effectiveness of learning through the packages by individuals and group
- (iv) to extend the study of sources of variation in learning through the packages at extended phase,
- (v) to extend the study of classroom situation and evaluate the outcomes.
- (vi) to obtain evidence concerning the ability of standard VII children to conduct simple scientific investigations in a laboratory situation.

The sample consisted of students of standard VII of the age group 11+. Hundred students selected for this purpose were divided into two equivalent groups. The subjects chosen for the study was science. The study was conducted in six phases in sequence. The six phases were (i) Pilot study (ii) Preparation of Learning packages, (iii) individual and group tryouts, (iv) demonstration phase (v) extension phase and (vi) laboratory phase. The data were collected with the help of (a) individual record sheets, revision data sheet and error sheet prepared to modify the learning packages, (b) criterion tests for four units prepared to measure the development of skills, (c) Performance test and Checklist prepared to measure students' competence in conducting investigations and (d) reaction and attitude scales. The obtained data were analysed using t-test.

Major findings of the study were:

- (1) At the demonstration phase the performance

of the experimental group taught through the learning packages was significantly better than the performance of the control group taught by the conventional method.

(ii) Effectiveness of learning through packages did not differ from unit to unit when examined in terms of knowledge acquisition, but differed significantly when examined in terms of knowledge and development of skills.

(iii) Development of laboratory skills was not uniform. At the laboratory stage it was found that in conducting scientific investigations in a laboratory situation as measured by the performance test, the performance of students who were exposed to the learning packages and given good training was significantly higher than that of the students who were not exposed to the learning packages but given conventional treatment.

(iv) The students had favourable reactions towards the learning packages.

(v) The teachers who were involved in the programme had favourable attitude towards the learning packages.

DEVELOPMENT OF A CURRICULUM IN BIOLOGY FOR  
SECONDARY SCHOOLS OF BANGLADESH.

(Author- I.A. Muttagi, Ph.D. Edu., MSU, 1981)

The General objective of the study was to develop an ecology curriculum which was suitable and effective in developing environmental literacy among the students of grades VI, VII and VIII of some selected schools of Bangladesh. The study was both a developmental as well as an evaluative research. The first phase of the study consisted of the development of curriculum, curricular materials and their preliminary and formative evaluation. The second phase of the study comprised summative evaluation or evaluation of the developed materials in the real classroom situations.

The design of the study necessitated sampling in two phases, for the formative evaluation and then for the summative evaluation. For formative evaluation the samples drawn were subject specialists (four) curriculum specialists (four), classroom teachers (twelve), headmasters (four), textbooks writers (three) and parents (twelve), headmasters (four) textbook writers (three) and parents (twelve), whereas for summative evaluation two urban and two rural schools, twelve classroom science teachers, and 552 boys and girls of grades VI, VII and VIII were selected. The experimental treatment for the teachers consisted of orientation programmes, contents of the students materials and the use of the teacher's manual. The experimental treatment for pupils consisted of twelve ecology units. During formative evaluation six types of questionnaires were used whereas for summative evaluation achievement tests for teachers and students were used. Attitude scales for teachers and students were used. The formative evaluation data was analysed using statistical measures like frequencies and summated means; for summative evaluation t-test was applied.

The major findings of the study were:

(i) In the formative evaluation, the curriculum and the curricular materials were found suitable and appropriate for the purpose of the study.

(ii) The curricular materials were effective in producing significant gain in knowledge of the students about ecological facts, principles, information and the related problems as well as their possible solution.

(iii) The curricular materials were effective in producing significant changes in the attitudes of the students towards environment in majority of the grades.

(iv) The Teachers manual was effective in producing significant positive changes in the attitudes of teachers.

(v) The teachers manual was effective in producing significant gains in knowledge of teachers about ecological facts and related problems with possible solutions.

(vi) There was low correlation between the gain in ecological knowledge and the change in attitude towards environment.

(vii) Rural students possessed significantly less ecological knowledge.

(viii) In two grades the rural students showed more favourable attitudes towards environment than the urban students of the same grades while in the majority of grades there was no significant differences in the mean gain in achievement of the rural and the urban students.

(ix) There was no difference between the rural and the urban students with respect to mean gain in attitudes.

(x) There was significant difference in the level of ecological knowledge of boys and girls; the girls possessed more knowledge than the boys.

(xi) In majority of the grades there was no differences in attitudes of boys and girls towards environment.

(xii) In majority of the grades the differences between the rural and the urban boys in respect of knowledge in ecology was significant that of urban boys was greater.

(xiii) The difference between the rural and the urban boys in respect of attitudes towards environment was significant, the rural boys and more positive attitudes.

xiv) There was significant difference between the rural and the urban girls in respect of ecological knowledge, the urban girls possessed more ecological knowledge.

(xv) The difference in attitudes towards environment between the rural and the urban girls was significant in majority of the grades; urban girls possessed more favourable attitudes in majority of the grades.

AN INQUIRY INTO THE EFFECTIVENESS OF SYSTEM APPROACH  
IN CURRICULUM PLANNING.

(Author: A., DABDE, Ph.D Edn, SGU, 1979)

Objectives of the study were

- (i) to analyse class VIII biology curriculum from the view point of systems components,
- (ii) to examine the appropriateness of the teaching methodologies suggested in teachers' guide,
- (iii) to examine the curriculum in the light of needs perceived by the teachers, school principals, students and parents,
- (iv) to develop an optimal curriculum for one year's unit
- (v) to evaluate the effectiveness of the optimal curriculum and
- (vi) to evaluate the effectiveness of system approach in planning a curriculum.

Sixtytwo students from class VIII were divided into experimental and control groups. Both the groups were matched on the variables like age, socioeconomic status, previous achievement, intelligence and sex. The data were collected by using Goddard's, Binet's Non-verbal group Intelligence test, Kuppuswamy's Socio-Economic Status Scale, Likert type questionnaire, questionnaires to teachers, students, school principals and parents, twelve unit tests and two achievement tests based on course taught during the experiment. The experimental group was taught by using appropriate media and methods and control group by traditional method. The collected data were analyzed using t-test.

Major findings of the study were:-

- (i) The experimental group obtained higher scores with respect to three units out of twelve units taught as compared to control group.
- (ii) For summative evaluation on two criterion tests the difference was not significant between experimental and control groups.
- (iii) There was no significant difference on retention scores between experimental and control groups.
- (iv) The optimal curriculum was evaluated in terms of students performance on criterion tests. There was significant difference between mean scores of the experimental and control groups, in favor of experimental group. Optimal curriculum produced significantly better results in terms of student performance.



Group-III

Vol. III  
Abstract-805

A CRITICAL STUDY OF THE CHANGES IN THE OBJECTIVES  
OF TEACHING MATHEMATICS IN THE PRIMARY SCHOOLS.

(Author.. D.G. Paranjape, Sangali, 1977 )

Main objectives of the study were:

- (i) to collect the mathematics syllabi used in primary schools of Maharashtra since 1901,
- (ii) to analyse the syllabi and determine their objectives,
- (iii) to determine as to how the objectives changed from time to time and
- (iv) to find out the deficiencies, if any, in the changes brought about in the syllabus.

The method used in the study was that of historical survey. Thus, it was essentially a library study. First, all the syllabi in mathematics used in Maharashtra from 1901 onwards were procured. With the help of the documents available, it was found that the mathematics syllabus had been revised several times during this period namely in 1901, 1913, 1928, 1940, 1947-1949, 1955 and 1966.

The next step was to list the objectives of teaching mathematics according to each of the seven syllabi. It was found that there was no statement of objectives in several of the past syllabi. The investigator therefore, made a detailed content analysis of the syllabi along with the corresponding textbooks and question papers.

Based on this analysis the implied objectives for each syllabus was stated in explicit terms. These seven sets of objectives were then analysed in a comparative frame to discern the changes that had been made over the period under study.

Major findings of the investigation were as follows;

(i) These were knowledge of reading and writing vulgar and decimal fractions, knowledge of reading and writing numbers, skill in the four fundamental processes, ability to handle personal money transactions, efficiency in understanding the environment and skill in drawing geometrical figures.

(ii) The two objectives which were introduced for the first time in 1966 were to develop the concept of fractional notation, and to lay a firm foundation for higher mathematical education.

(iii) The disciplinary and vocational aims emphasised in some of the previous syllabi were dropped in the 1966 syllabus.

(iv) Two objectives greatly emphasised in the 1966 syllabus and which continued to be included were development of complete mastery over the four fundamental operations of arithmetic and development of a deeper understanding of the basic concepts and structure of mathematics.

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Group-III

Volume III  
Abstract 18761

AN EXPERIMENTAL STUDY OF TEACHING SCIENCE IN  
STANDARDS VI AND VII THROUGH MODULES,

( Author- M.M. Sahajahan, Edu.,MSU, 1980)

The objectives of the study were

(i) to design and develop modules for teaching science in standards VI and VII,

(ii) to study the effectiveness of the modules as an instructional method with respect to conventional method

(iii) to study the relationship between students' achievement through modules and the attitude of the students towards the module as well as academic motivation of the students, and

(iv) to compare the achievements through modules of high achievers and low achievers, boys and girls, high academic motivation and low academic motivation and the like.

Two classes from Dacca city in Bangladesh were selected for the study. Matched group design was used for the study. The duration of the experiment was one and a half months. The data were collected using achievement tests, module evaluation check list, attitude scales for studying students' attitudes towards modules. The data was analysed by t-test, chi-square test and other statistical techniques.

The major findings of the study were:-

(i) The modular way of learning was more effective than the conventional method in case of some modules, while in case of other modules it was found as effective as the conventional methods.

(ii) An overwhelming majority of the students possessed a favourable attitude towards modular instruction and their attitude was found to be stable throughout the period of experimentation.

(iii) The teachers' reactions to modular approach to instruction was favourable.

(iv) The achievement of students through instructional modules seemed to have a low positive correlation with their attitude towards modular way of learning.

(v) While learning through modules, no significant difference was found between the achievement of extremely high and extremely low achievers and between girls and boys.

(vi) Attitudes of students towards instructional modules, academic motivation of students and their read comprehension was not related to one another.

Group-III

Vol. III

Abstract-825

A CRITICAL STUDY OF CURRICULUM DEVELOPMENT  
AT THE STAGE OF ELEMENTARY EDUCATION IN THE  
STATE OF GUJARAT.

(Author- G.S. Shukla -Gujarat Vidya peeth, 1975)

The major objectives of the study were

- (i) to review the changes introduced in the curriculum of primary education during the years 1940-1970,
- (ii) to make a comparative study of modifications introduced in the curriculum,
- (iii) to study critically the primary school curriculum introduced in Gujarat in 1967,
- (iv) to enquire into factors responsible for the curriculum change, and
- (v) to evaluate the various curricula of primary school during the year 1940-1970. The investigation also developed a scheme of curriculum construction.

The sample consisted of teachers, headmasters, supervisors and teacher educators selected from all the districts of the state. The sample included twenty five headmasters, thirty teachers, ten supervisors from each district and sixty teacher educators from ten primary training colleges. The total number of respondents was 1184. The tools for data collection were documents, questionnaires and interviews. The statistical techniques used were descriptive statistics.

The major findings were:-

- (i) The primary education curriculum was divided into two phases, for classes I to IV and V to VII.
- (ii) The major defects of the primary school curriculum were lack of practical knowledge, inadequate arithmetic in the lower classes, emphasis on

information rather than understanding, a heavy load of subject matter, absence of moral education, low level of instruction in history, regional geography, the local trade, industry, etc. a curriculum devoid of flexibility and the like (180 the respondents felt an urgent need for a continuous programme of monitoring and evaluation of the curriculum.

(iv) The need to undertake studies for improving teacher motivation was felt.

(v) Teachers and teacher educators felt a lack of involvement in the process of curriculum construction.

(vi) A model scheme for the development of curriculum was designed.

Group-III

Vol. III  
Abstract- 851

AN INVESTIGATION INTO PROBLEMS AND DIFFICULTIES  
IN LEARNING HINDI BY THE TELUGU SPEAKING STUDENTS OF  
CLASS VIII IN THE HIGH SCHOOLS OF ANDHRA PRADESH

( Author- P; Chinappa., Ph. D. Edu., MSU., 1979)

Major objectives of the study was to survey the problems and difficulties faced by telugu speaking students of class VIII in learning Hindi. The study was confined to schools located in the Andhra Pradesh region.

The tools of research used a questionnaire, an achievement test in Hindi and an interview schedule. In addition, the Hindi textbooks and the syllabus also provided the data. The achievement test focussed on knowledge, comprehension, language skills, analysis, originality and translation. The test items were tried out and the final selection was made on the basis of their difficulty values and discrimination indices. The sample consisted of 960 students from the schools of Andhra Pradesh, studying in class VIII and learning Hindi as the second language. Of these students, those who scored less than twenty percent were interviewed. The questionnaire was sent to 480 teachers of whom 262 responded. The data obtained were tabulated and converted into percentages.

The major findings were:-

(i) The state Government had not taken the subject of Hindi seriously. Teaching of Hindi was considered to be a subject of the central government and no budgetary provision was made by the state government.

(ii) The government had not made Hindi a really compulsory subject. Though passing in Hindi was essential, students had to secure only 20 percent marks in Hindi and these marks were not added to the total marks in the Board's examination.

(iii) The administration had not been able to appoint Hindi teachers in all the schools. They had not appointed any expert in Hindi at the SCERT.

(iv) The education departments of the universities also did not pay special attention to improving Hindi teaching.

(v) The State Education Department had allotted only three periods per week for Hindi.

(vi) The teachers and the students were not clear about the reasons for learning Hindi as the second language and therefore interest in learning Hindi did not develop among students.

(vii) Proper environment was not there for learning Hindi. Teachers in schools spoke either Telugu or English. At home also these two languages were used.

(viii) Hindi teachers were not well trained. They taught Hindi through Telugu.

(ix) School libraries also were not well equipped with Hindi magazines or books.

(x) Proper base for learning was not laid in the beginning stage because of inadequate and defective curriculum and teaching methods.

(xi) Students listening comprehension was very poor.

(xii) Expression in Hindi was also very bad.

(xiii) The textbooks were defective. They failed to create interest among students for reading Hindi books.

(xiv) A number of other problems and difficulties were identified, for example, inadequacy of instructional materials, inadequate time in the time table, defective teaching methods, etc.



Group-III

Volume III  
Abstract 883

AN INVESTIGATION INTO LISTENING COMPREHENSION IN GUJARATI  
OF PUPILS OF CLASS V OF CENTRAL GUJARAT.

( Author- K.J. PATEL ) Ph.D. Edu.,, SPU, 1982

Main objectives of the study were:-

- (i) to provide schools with a valid and reliable tool to measure listening comprehension of pupils of class v, (ii)
- (ii) to establish norms of listening comprehension in Gujarati for pupils of class V of the Central Gujarat
- (iii) to study sex differences with regard to listening comprehension and (iv) to study cultural differences with regard to listening comprehension.

The test was constructed and standardized keeping in view the various components of listening comprehension such as (i) to note significant details of what is listened, (ii) to give sequence of events or ideas listened, (iii) to give meaning of new words in the context of what is listened, (iv) to draw inferences from what is listened (v) to give proper caption to the things listened, and (v) to find out relationship between ideas presented by the speaker. The test was constructed and standardized on a sample of 2256 pupils selected by stratified random sampling method. The listening material was presented through a tape-recorder. Reliability of the test was found out by test-retest method, split-half method, rational equivalence method, Flanagan formula, Rulon method and analysis of variance approach. Reliability coefficients of the subtests ranged from as low as 0.26 to as high as 0.84. Validity indices were also estimated by different methods. The test had a good construct and concurrent validity.

Important findings of the study were:-

- (1) There was no sex differences with regard to listening comprehension.
- (ii) Pupils of urban area were good at listening comprehension as compared to the pupils of rural area.
- (iii) Pupils of the age group of ten were found to be

superior in listening comprehension to the pupils of other age groups.

(iv) There was positive relationship between listening comprehension and listening habits.

(v) Students who were less anxious did better on listening comprehension test than their counterparts, with higher anxiety.

(vi) Students who had high IQ performed better on listening comprehension test than students having low IQ.

(vii) There was no effect of size of the family on listening comprehension.

(viii) A positive relationship was found between listening comprehension and achievement in school subjects.

(ix) Pupils of Baroda district were superior in listening comprehension to the pupils of other districts of Central Gujarat namely Kheda, Ahmedabad and Gandhinagar.

Group - II

Volume - III  
Abstract 910

A STUDY OF EFFECTIVE PSYCHOLOGICAL CORRELATES  
OF READING COMPREHENSION IN GUJARATI

(Author - N.A. VORA, Th.D. Edu., SPU, 1982)

Main objectives of the study were

- (i) to study reading comprehension in Gujarati of pupils of standard VIII of Central Gujarat,
- (ii) to study the rate of reading in Gujarati of pupils of standard VIII of Central Gujarat,
- (iii) to study the reading achievement in Gujarati of pupils of standard VIII of Central Gujarat
- (iv) to study the inter-relationship between and among the three dimensions of reading
- (v), to study the inter-relationships of the independent psychological variables
- (vi) to study the effect of demographic variables on the three dimensions of reading and
- (vii) to study the relationship of three dimensions with the psychological correlates namely anxiety, n-Ach, attitude towards reading, interest and motivation towards school separately.

The study was carried out on a sample of 1140 pupils selected by stratified random sampling method from different districts of Central Gujarat. Standardized tools used for collecting the data were silent Reading Ability Test of R.S. Trivedi and B.V. Patel, Reading Attitude Scale of B.V. Patel, General Anxiety Scale of H.K. Nijhawan, Achievement Motivation Test of Prayag Mehta, Interest Inventory of J.C. Parikh and Junior Index of Motivation of Jack Frymier. A factorial design was adopted for data analysis.

Important findings of the study were :

- (i) Reading comprehension was a normally distributed phenomenon in the sample under study.
- (ii) Reading speed and reading achievement were also normally distributed among the sample.
- (iii) Pupil who were highly motivated were less anxious.
- (iv) Pupils with positive attitude towards reading were less anxious.
- (v) The more the literary interest the less was the anxiety.
- (vi) The students who were highly motivated towards school were less anxious.
- (vii) There was positive relationship between n-Ach and attitude towards reading, n-Ach. and literary interest, n-Ach and attitude towards school.
- (viii) There was a positive relationship between motivation towards schools (MTS) and attitude towards reading, MTS and literary interest.
- (ix) The better the speed of reading the better was the reading comprehension.
- (x) There was a positive relationship between reading comprehension and reading achievement.
- (xi) Pupils of urban area were better at reading comprehension than the pupils of rural area. Boys were superior in reading comprehension to the girls.
- (xii) Urban pupils were slightly better in reading speed than the rural pupils. Sex did not have any effect on reading speed. Pupils who were less anxious did better on reading speed than their counterparts.
- (xiii) Pupils of urban area did better on reading achievement than their counterparts. There was a positive relationship between n-Ach. and reading achievement (R.A) reading attitude and reading achievement literary interest and RA, motivation towards school and RA.

GROUP II

VOLUME II  
ABSTRACT-408

AN INVESTIGATION INTO THE BASIC HINDI  
VOCABULARY OF CHILDREN OF THIRD CLASS  
(USUALLY OF 8+) IN THE STATE OF HARYANA,  
PH.D. EIU., KUR. U., 1977.

(Author: J.N. Kalra)

The purpose of the study was to investigate into the basic comprehension vocabulary in Hindi of the children of class III in Haryana.

The study was undertaken at two stages, viz., the pilot study and the main study. For the main study, textbooks of class III and other reading materials were analysed for collecting words. The other sources for collecting words were, children's writings and words used by teachers while teaching these children. The total number of words finally collected was 1632. These words were arranged in alphabetical order and distributed into fourteen checklists each containing 116 to 120 words. Against each word five alternative meanings were given and the children were asked to underline the correct meaning and also to write its serial number in the space given for the purpose. The sample, which consisted of about one percent of the population of children of class III in Haryana, was 1450. This sample of children was taken in clusters from class III of different schools. The scripts of these children were analysed.

An alphabetical list of words was prepared showing the percentages of the students in the sample who knew the meanings, and confidence intervals of these percentages for the population. The glossary of words thus prepared could be used by the textbook writers in the subjects of Hindi, social studies and general science for class III in Haryana.

AN INVESTIGATION INTO THE BASIC HINDI  
VOCABULARY OF CHILDREN OF SEVENTH CLASS  
(USUALLY OF 12+) IN THE STATE OF HARYANA,  
... PH.D. DEU., KUR. U., 1974.

(Author: J.N. Kaushik)

The main aim of the study was to take stock of the basic comprehension vocabulary of children by finding out the percentage of children who knew the meanings of different words.

The study employed normative survey method. In the first phase of this survey 1,300 words from the books for classes IV, V and VI were collected. Based upon the empirical evidence collected from 300 children only 650 words were selected for consideration towards the preparation of final list. In the second phase 1,851 more words were collected from NCERT produced books prescribed in Haryana and Punjab. Thus, the total number of words tried on a representative sample was 2,501. The sample consisted of about one percent of the population of seventh class children in Haryana, stratified districtwise and sexwise. A total of 1,417 children were involved at first but ultimately checklists completed by 1,150 children were analysed. The proportion corrected for guessing and the confidence intervals for each word were calculated and converted into percentages. These statistics were used for purposes of knowing the difficulty level of words used in the checklist.

The findings of the study were related to the production of two types of glossaries - glossary I and glossary II which were arranged in alphabetical order. In glossary I were words taken from the textbooks of lower classes (IV, V and VI) known to seventy per cent of students and above of class VII. In glossary II were words taken from the class VII textbooks and writings and speech of students of this class in Haryana, as well as the words taken from the books of the lower classes (IV, V and VI) which were known to not less than seventy percent students of class VII.

THE DEVELOPMENT OF PRIMARY EDUCATION IN PUNJAB, WITH SPECIAL REFERENCE TO THE REGION NOW CALLED HARYANA, FROM 1935 TO 1969, PH.D. ELU., KUR. U., 1974.

(Author: B.C. Gupta)

The study aimed at finding out facts related to the development of primary education in Haryana and Punjab, and at organising them into a complete history. It also aimed at re-evaluating the qualitative and quantitative progress of primary education.

Historical research method was applied and the data were collected through both the primary as well as secondary sources.

The findings of the study revealed that (i) the period from 1935 to 1969 had been a period of great expansion in educational facilities; (ii) in the post independence period the expansion was much greater than in the pre-independence period; (iii) there was an overall reduction in wastage during the post independence period; (iv) during the period under study, education of girls increased in both the states, and it was rapid during the post independence period; (v) there was a significant increase in the number of women teachers in both the states - in Haryana it increased from 390 in 1934-35 to 590 in 1946-47, i.e., an increase of 51.3 percent, while in Punjab during the same period the increase was 62.2 percent and the increase continued during the post independence period also; (vi) number of students belonging to scheduled castes/tribes steadily increased, but the number of separate schools for them decreased; (vii) the number of primary teachers in Punjab increased from 14,694 in 1934-35 to 18,777 in 1946-47; correspondingly there was an increase in the number of training institutions; and (viii) voluntary agencies played a very important role in the development of education in India.

GROUP -I

Volume -I  
Abstract -320

AN INVESTIGATION INTO THE BASIC VOCABULARY (IN KANNADA)  
OF ELEMENTARY SCHOOL CHILDREN OF STANDARDS I TO VII OF  
MYSORE STATE, EDUCATIONAL RESEARCH BUREAU, BANGALORE,  
1964. (NCERT FINANCED)

(B.K. CHANDRASEKHARIAH)

The objective was to prepare a comprehensive basic graded vocabulary of about 4,000 to 5,000 words which could be understood by children in all parts of the state and which could be used as the basis for all reading programmes and the production of reading materials for children of primary standards I to VII in Mysore State.

A preliminary list of 5,757 words was prepared from different sources such as:

- (i) departmental readers, I to VII;
- (ii) word list published by the Adult Education Council, Mysore;
- (iii) word list published by V.K. Javli;
- (iv) word list published by the Mysore Education Federation;
- (v) word list prepared by Sahitya Rachanashala trainees and
- (vi) miscellaneous. Two hundred primary school teachers, males, and females, from urban, rural and slum areas were selected for judging the selection and grade-placement of words in the preliminary list. They included ten teachers from each of the twenty districts in the state.

After the analysis of the grade-placement of the words, 5,000 words were selected to prepare the comprehensive basic graded vocabulary. The allocation of the words in each standard was as follows: standards I, II, III, and VI 700 words each, standard IV 750 words, standard V 800 words, and standard VII 650 words.



EFFECTS OF PSYCHOLOGICAL INPUTS ON  
THE ACADEMIC PERFORMANCE OF THE PRIMARY  
SCHOOL CHILDREN, Ph.D. Edu., MSU, 1977.

(Author: A.J. Chokshi)

The main objectives of the study were: (i) to develop a psychological education input model for primary school children; (ii) to study the effects of psychological education inputs on the academic performance of the pupils; and (iii) to experimentally study the effectiveness of the psychological education inputs on certain psychological traits constituting the affective domain for development of the pupils.

A conceptual model of psychological education inputs was evolved by studying and analysing the literature on attempts made for developing achievement motivation and other psychological traits, keeping in view the age group to which the present model was to be adopted. The effectiveness of the study was studied under two phases. In the first phase the experiment was tried out for one month and the input model was refined. The final experiment was conducted for one full term of four months. Sample for the experiment consisted of eighty boys studying in standard VII of a municipal primary school in Baroda. The sample was divided into two groups matched on intelligence. Content inputs were controlled in both the groups. A pre-test, a post test and weekly periodical tests in each subject were administered to both the groups simultaneously.

It was found that the psychological input model improved the academic performance of the pupils significantly. The psychological education input programme increased the achievement level of pupils significantly. It also affected the adjustment and classroom trust of the pupils positively. It increased the anxiety level of pupils. The psychological education input programme increased the initiative level of pupils. This programme also increased the activity level of pupils. It affected social relationships among pupils positively. The pupils became more realistic when they became aware of their abilities. At the post-performance level, the pupils manifested more moderate risk taking behaviour. It was observed that the model was effective from various angles.

A PSYCHOLOGICAL STUDY OF LEARNING PROCESS  
WITH SPECIAL REFERENCE TO AUDIO-VISUAL AIDS,  
Ph.D. - PSY., KAN. U., 1975.

(Author: M. Seth)

The study examined the following hypotheses:  
(i) the child with higher socio-economic status would tend to assimilate larger number of words as compared to the child of lower socio-economic status;  
(ii) a child with good physical health would tend to acquire a larger number of vocabulary than one in poor health; (iii) the children of working mothers would tend to have smaller vocabulary in comparison to the nonworking mothers; (iv) the only child would tend to acquire a larger number of vocabulary as compared to child with siblings; (v) the girls would tend to acquire a larger number of spoken words as compared to the boys; (vi) the children with high intelligence would tend to attain higher scores in language learning as compared to the children with low intelligence; and (vii) audiovisual aids would tend to increase the achievement scores of children with low intelligence as compared to the children with high intelligence.

One hundred and eight infants of working mothers were randomly selected for studying the process of speech. In the area of language learning sixty-three girls of ages ranging from 3+ to 5+ of Fatima Convent School, Kanpur, were studied and they were taught with the help of audiovisual aids. The research tools used included: (i) the Valentine's Intelligence Tests (Hindi version); (ii) observation; and (iii) the Kuppaswamy's Socio-Economic Status scale. The analysis of variance was used to see if the difference in the criterion variables were due to the influence of various experimental variables. The t test was also used to see whether children of different SES or intelligence groups differed on the criterion scores.

The following were the main findings of the study: The child uttered his first word at the age of about one year. The vocabulary size was found to be very much influenced by the socio-economic status of

the parents. Those who belonged to upper SES group learned to speak early and their vocabulary size was significantly bigger than that of the infants from lower SES group. The infants having very good health were not found to be significantly different in their mean number of words spoken from the infants having very poor health. The difference in the vocabulary size was not found to be significant amongst children of working or nonworking mothers. Vocabulary of infants having siblings did not differ significantly from those who did not have siblings. Intelligence was found to be highly correlated with the achievement of girls in language learning. Audiovisual aids were found to be more beneficial for girls of lower intelligence group as compared to the girls of higher intelligence group.

ASSESSMENT OF SILENT VERSUS ORAL READING  
SPEED AND COMPREHENSION OF SCHOOL CHILDREN,  
CIIL, MYSORE, 1974.

(Authors: P. Ahuja and G.C. Ahuja)

The study aimed at assessing and finding out relationships between silent reading speed, silent reading comprehension, oral reading speed, and oral reading comprehension.

Two reading comprehension tests in English, one for silent reading and the other for oral reading, of comparable difficulty were constructed. Each test contained 568 words and fifteen comprehension questions. Item validity, item difficulty and test reliability for these tests were computed which were found to be high. A sample of fifty boys and fifty girls in the age group of 12+ was drawn from standard VIII of two English medium schools of Mysore. The two tests developed were administered individually to the pupils. The speed scores in terms of words per minute read silently and orally were calculated separately for each pupil. Comprehension scores were computed by giving one point credit for each correctly marked answer to the comprehension questions. Percentage comprehension scores were calculated separately for silent and oral reading. Reading indices were computed both for silent and oral reading for each pupil by multiplying speed score and the corresponding comprehension score.

The major findings of the study were: (i) the means of the silent reading speed, oral reading speed, silent reading comprehension, oral reading comprehension, silent reading index and oral reading index were respectively equal to 178.90 words per minute, 147.30 words per minute, 71.70, 73.80, 135.10 and 110.10 and corresponding standard deviations were 56.82, 35.88, 19.94, 15.17, 67.6 and 39.92; (ii) the coefficient of correlation between silent and oral reading speed was 0.72, silent and oral reading comprehension was 0.32, silent reading speed and comprehension was 0.40, oral reading speed and comprehension was 0.25 and between silent and oral reading indices was 0.69, all being significant at .01 level.

GROUP II

VOLUME II  
ABSTRACT-418

SURVEY OF THE ACTIVE VOCABULARY AND  
STRUCTURE TYPES OF TRIPURI SPEAKING  
CHILDREN, CIIL, MYSCRE, 1974.

(Author: P. Pai and V.Y. Jeyapaul)

The objective of the study was to find out the active vocabulary and structures that would be found in the speech of Tripuri speaking children of the age groups 4+, 6+, 8+ and 10+.

The investigators visited homes, schools and play grounds where the Tripuri children could be found and interviewed them in natural settings. The children were selected randomly from both sexes. Roughly twentyfive children in each age group were interviewed in three to six different villages. The investigators used question and answer method. Questions were asked with the help of a teacher. Different types of questions were put to different age groups depending upon their comprehension level and verbal capacity to answer. Induced conversation method was also used in some cases by asking one of the children to put a question to another and that child, after answering, put a question to the first child. Clues were given for questions whenever conversation stopped. The children talked more freely. The answers to questions and conversations were recorded, transcribed, analysed and classified.

The findings revealed that (i) the active vocabulary showed a gradual and constant increase with respect to age; (ii) the syntactic complexity also was found to increase progressively in the higher age groups; (iii) the children of lower age groups were not able to give long narration or stories; (iv) the children of lower age groups were familiar with less number of semantic domains than those of higher age groups; (v) the girls had a comparatively larger vocabulary in the areas of cooking, pounding etc., and boys in the areas of cultivation, harvesting, house building and liquor making and (vi) Bengali words were almost nil in the speech of 4+ children and were found to increase with age.

GROUP II

VOLUME II  
ABSTRACT-431

AN EXPERIMENTAL STUDY OF THE PROBLEM OF  
MORAL INSTRUCTION IN UPPER-PRIMARY SCHOOLS,  
PH.D. EDU., MYS. U., 1974.

(Author: A.S. Seetharamu)

The study aimed at finding the effect of direct moral instruction on the moral development of children.

For the purpose of the investigation, the test of moral development was developed. It comprised thirty-four situations involving moral judgement. The situations were reflective of life incidents in children's day to day activities. The test covered various aspects of the morality like honesty, truth, responsibility, generosity, courtesy, kindness, service and sacrifice, love of fellowmen, patriotism, revolt against injustice, etc. Suitable modifications in the test were made after a tryout. The study employed an experimental method having experimental and control groups. The dependent variable was the moral development in students. Moral development, intelligence, and socio-economic status of 562 children studying in standards VI and VII of four schools located in the different localities of the Mysore district were measured. From among them, the experimental and control groups were formed by matching on means and standard deviations on the tested variables. The experimental group was taught the moral lessons by investigator himself for a period of twelve weeks to avoid teaching variations. The experiment ended with the post-testing of moral development. Analysis of the data involved chi-square technique.

The following were some of the findings: (i) Instruction of honesty and responsibility was more effective for girls than boys. (ii) Boys improved on the nondeceitful behaviour by the moral instruction. (iii) A definite improvement in moral judgment was brought in by moral instruction. (iv) There was a definite improvement on the subscale of kindness by moral instruction. (v) Scores on the fair play or the democratic character improved significantly for the experimental group while not of the control group for both boys and girls taken together and separately. (vi) On the subscale of items on courtesy even to an enemy, no significant improvement was observed either in the case of the experimental or control group.

A SURVEY OF ACTIVE VOCABULARY OF  
MUNDARI CHILDREN, CIL, MYSORE, 1975.

(Author: N.K. Sinha)

The study aimed at making a comparative assessment of the quantum of active vocabulary of Mundari children of age groups 4+, 6+, 8+ and 10+, in their mother tongue.

During the pretryout stage a questionnaire was designed so as to elicit two types of responses, one involving enumeration of items and the other involving spontaneous speech by way of narration. This was administered on twenty boys and girls. During the final tryout stage two different questionnaires were prepared, one meant for 4+ and 6+ age groups which did not involve abstract items, and the other meant for 8+ and 10+ age groups involving some abstract items also. The sample for final tryout consisted of twenty-six children in 4+ age group, twenty-four in 6+, twenty-six in 8+ and twenty in 10+. The children of 4+ age group were selected from houses and the rest from schools of twenty villages in south of Ranchi. Fifteen of these villages were inhabited by standard variety (Hasada variety) of Mundari speakers and the rest by those speaking nonstandard Hasada dialect. Questions were put to the individual child, when he was alone, by the investigator who was accompanied by a school teacher to assist. After the rapport was established, information was elicited from each child in two sittings on an average, each sitting being for forty-five to sixty minutes. Each child's responses were either transcribed directly or taped.

The following were the findings of the study:  
(1) The children of 4+ age group had minimum number of borrowed words from other languages, namely, Hindi and Sadani which were spoken in the villages. Their efficient control of native vocabulary without

any prompting or suggestion came to about 300 words, mostly nouns and verbs. There was no sexwise differentiation of vocabulary items at this stage. (ii) The children of 6+ age group had more enriched vocabulary than those of 4+ age group. Their vocabulary included certain Sadani and Hindi items, although the maximum number of Mundari words elicited was nearly 500. There was no sex difference in the vocabulary in this age group. (iii) The use of Mundari words of children of 8+ age group declined in general. There was marked difference in both the sexes. Girls retained the household words, while boys learnt professional words, mostly relating to farming. Children of this age group used a maximum of nearly 600 words in Mundari and about 100 common words in Hindi which they used very frequently. (iv) The children of 10+ age group exhibited less knowledge of Mundari words. Although they could very well speak in Mundari, Hindi and Sadani words crept in profusely. The best informant in this age could not give more than 600 Mundari words. There was no sex difference in this age group of school going children as regards vocabulary in Mundari.



VALIDATING THE HIERARCHY OF EDUCATIONAL  
OBJECTIVES AND RELATING IT TO THE MEDIUM  
OF INSTRUCTION OF ADOLESCENTS OF MYSORE  
STATE, RCE, MYSORE, 1973.

(Author: P.N. Dave and C.L. Anand)

The investigation was undertaken to test the following hypotheses: (i) differences will exist among the levels of learning identified as knowledge (K), understanding (U) and application (A); (ii) the levels of K, U and A would not be independent of each other, but form a cumulative hierarchy; and (iii) differences will exist between the attainment levels of students taught through the media of the mother tongue and the other tongue.

The sample consisted of 659 students studying in standard VIII. The classification of the test items under K, U and A categories was done by the content-cum-method masters. The final classification of each item was accepted on the basis of the higher percentage agreement between several judges. The statistical techniques used were the Friedman's ANOVARA Test, and the McQuitty's syndrome analysis.

The findings were as follows: The learning outcome, even when not derived through a controlled teaching learning process with specific goals, was found to form the hierarchy as envisaged by Bloom; the learning outcomes in terms of K, U and A were different and were found to be hierarchically related.

SOCIO-ECONOMIC ENVIRONMENT AS RELATED TO THE  
NON-VERBAL INTELLIGENCE OF RANK AND FAILED  
STUDENTS, RCE, MYSORE, 1971.

(Author: P.N. Dave and J.P. Dave)

The objectives of the study were: (i) to investigate the relationship of some factors in the home environment, i.e., parental income, education, occupation, caste, religion and concern, to the nonverbal intelligence of rank and failed students; (ii) to examine the environmental background of the students pertaining to each of the factors mentioned above; and (iii) to study the effect of sex and the medium of instruction on nonverbal intelligence.

The stratified samples of 128 and 80 academically good and poor, i.e., students who secured first five ranks in the annual examination of the standard VII and those who failed to get the promotion in the standard VIII (rank and failed), were chosen from sixteen high schools of Dharwar, Hubli, Madras, Trivandrum and Hyderabad. The data regarding their parental concern, income, education, occupation, caste and religion were collected. The Nafde's Nonverbal Test of Intelligence was administered. The analysis of variance and chi-square were used for the analysis of the data.

The findings of the study revealed that (i) the nonverbal intelligence of the rank students was superior to that of the failed students; (ii) there existed significant differences in the intelligence of students coming from homes having different parental incomes and occupations; (iii) the nonverbal intelligence of rank boys was superior to that of rank girls; (iv) the intelligence of rank students studying through the medium of English was superior to those studying through the medium of their mother tongue; (v) no such differences were found in the intelligence of failed students classified with respect to all the above variables; (vi) a higher percentage of rank students belonged to homes having higher parental income, occupation and education, whereas a higher percentage of failed students belonged to homes having lower parental income, occupation and education; (vii) size of the family was not related to the academic achievement and (viii) parents of the rank students showed more academic concern about their wards than those of failed students.

A SOCIOLOGICAL STUDY OF PRIMARY SCHOOL  
TEACHERS IN MYSORE CITY, DEPT. OF POST-  
GRADUATE STUDIES AND RESEARCH IN SOCIOLOGY,  
MYSORE, 1971. (MYS. U., FINANCED)

(Author: K.N. Venkatarayappa and L. Mukta)

The investigation aimed at studying the different aspects of the life of the primary school teacher, namely, school, family, community, economic conditions, and his attitude towards certain social problems.

The sample for this study comprised fifty person teachers of each sex group from the two major types of schools - public and private. In all seventy-one men and 167 women teachers from public schools and twenty men and sixtyseven women teachers from private schools were selected. Half of the sample belonged to the age group of thirty to forty. The data were collected through a questionnaire containing multiple choice type and open ended questions.

The major findings of the study were:  
(i) educational achievement of the teachers was found to be very poor and had remained unchanged through a number of years; (ii) their economic achievement was found to be poor and unchanged over a number of years; (iii) teachers in large number came from families of low income group, their status was low and they belonged to their parents' class of society; (iv) their restricted friendship with teachers in general and nonparticipation in the local bodies or community organisations made their recognition vague in the public; (v) by the nature of their occupation they were found to influence the community besides moulding the child, as change agents and builders of democracy; and (vi) in popularising and implementing family planning they were considered competent enough.

DEMONSTRATION OF AUDIO VISUAL AND READING AIDS  
TO SCHOOL STUDENTS AND TESTING THEIR READING  
SPEED IN THREE LANGUAGES? Kannad, Hindi and  
ENGLISH,

( Author- G.C. Ahuja and P. Ahuja )

The main objectives of the study were

- (i) to acquaint school children with various reading skills and to make them conscious of their importance for future educational growth.
- (ii) to create interest in the environment from where they can learn many things.
- (iii) to break the unfounded fears about difficulties in learning a language by showing how it may not at all that difficult.
- (iv) a general evaluation of the audio-visual aids either produced or purchased by the CIL, Mysore and
- (v) to measure the reading speed and comprehension in three languages- Kannada, Hindi and English.

Forty students of class VIII of an English medium school of Mysore formed the sample of the study. The method of study consisted of a sandwich audio-visual demonstration programme of three hours duration which included (a) closed circuit television programming consisting of a film entitled Energy Crisis under the head learn from your Environment produced by the CIL, Mysore. (b) three films on Reading purchased from an outside source, (c) a film on how to Learn a Language produced by the CIL, Mysore. The students were later tested for reading speed and comprehension in three languages namely English, Hindi and Kannad. The reading tests in the form of informal checks were locally prepared.

The major findings of the study were:-

- (i) The CCTV Programme was liked by the students and was found to be very effective both from the language and comprehension point of view by more than ninety five percent of the students.

(ii) The students were not very benefitted by the three films on reading purchased from an outside source. Many students who found the language difficult or could not follow it fully could not grasp the message, completely.

(iii) More than ninety five percent of students found the film on How to Learn Language very interesting, clear and could fully follow the message of the film.

(iv) The reading speed per minute for Kannad, Hindi and English languages were found to be 95.93, 100.5 and 186.62 words, respectively and the reading comprehension was 57.5 percent, 63.75 percent and 73 percent respectively for the three languages.

GAP BETWEEN TEACHER AND CURRICULAR DEMAND  
A CASE STUDY.

( Author- GILL, Mysore, 1977)

The main aim of the project was to study the gap between teacher competence, instructional objectives and the language content prescribed in the form of language curriculum (mother-tongue Kannada) for lower primary upper primary and high school standards in the state of Karnataka.

The study employed content analysis technique. Instructional objectives, the syllabus and textbooks prescribed for classes I to X for teaching mother tongue were analysed to study the compatibility between them. A critical examination of the syllabus prescribed for TCH, with special reference to mother tongue teaching in the light of instructional objectives for TCH and high school classes was also done.

The findings of the study were:-

- (i) The instructional objectives for classes I to IV, V to VII and VIII to X were grouped together. They were too broad and were not provided classwise keeping in view the different age groups for whom the syllabi were meant.
- (ii) The course contents revealed that the instructional objectives were not properly reflected in the syllabus meant for the said standards.
- (iii) A wide gap existed between syllabi of classes III to X and textbook content.
- (iv) The objectives of MCH programme were not very clearly reflected in the syllabus prescribed.
- (v) The syllabus prescribed for mother tongue teaching in B.Ed. programme did not reflect the objectives of teaching mother tongue to classes VIII, IX and X.

EFFECT OF DIFFERENCE BETWEEN MOTHER TONGUE  
AND ANOTHER LANGUAGE AS MEDIUM OF INSTRUCTION  
ON ACHIEVEMENT, MENTAL ABILITY, AND CREATIVITY  
OF THE EIGHT STANDARD CHILDREN

(Author-A.K. Srivastava and R. Khatoon, CIL,  
Mysore, 1980)

The objective of the study were to compare the differential effects of mother tongue as medium of instruction and a language that is not mother tongue as medium of instruction on intelligence, achievement and creative abilities.

The sample consisted of sixty five girls and fifty boys from five English medium schools and forty one girls and forty three boys from five Kannada medium schools in the city of Mysore. They were all from standard VIII and represented both lower and middle classes. All the students had Kannada as their mother tongue. The students whose mother tongue and medium of instruction were the same were grouped as same group and those for whom the two were different as different group. The Standard Progressive Matrices and Mehdi's Tests of Creativity, both verbal and non-verbal, were the tools used for data collection. The average of the total marks obtained in all the academic subjects of the previous six consecutive examinations served as the criterion for academic achievement. T-test was employed to compare the groups. After testing for homogeneity of variance, analysis of covariance was employed to compare the two groups on achievement and creativity adjusted for the influence of intelligence.

Following were the major findings

- (1) The different group was significantly higher on non-verbal intelligence than the same group. This was true when the analysis was done separately for boys, girls and also the combined sample.

- (ii) The achievement of boys and the combined sample of the different group was significantly superior to their counterparts from the same group and there was no such difference among girls from the same group. However, when the influence of intelligence was controlled, no such differences existed.
- (iii) The achievement in the first language of the combined sample from the different group, after adjusting for the influence of intelligence, was significantly superior to that of the same group and no such difference existed when boys and girls were considered separately.
- (iv) The achievement in the second language of boys, girls and their combined samples from the different group was significantly superior to that of their counterparts from the same group even after adjusting for the effect of intelligence.
- (v) As regards fluency and flexibility dimensions of verbal creativity, the different groups of boys, girls and the combined sample were superior to their counterparts from the same group. When intelligence was controlled, such differences continued to exist except with girls and the combined sample on fluency dimension.
- (vi) On originality dimension of verbal creativity, same and different groups did not differ significantly among boys, girls and the combined sample after adjusting for intelligence.



- (vii) On elaboration dimension of non-verbal creativity, different groups among girls and the combined sample were better than their counterparts from same group and no such differences existed among boys after adjusting for intelligence.
- (viii) On originality dimension of non-verbal creativity, boys, girls and combined sample of same and different groups did not differ even after adjusting for intelligence.

Group-II

Vol.III

A bs tract- 243

# NUTRITIONAL STUDIES ON SCHOOL CHILDREN

(A uthor- S.S. Sail, Ph.D., MSU, 1970)

The objectives of the study were:-

- (i) to assess the extent of undernutrition and malnutrition in school children in rural areas
- (ii) to study the impact of the school lunch programmes based on the locally available foods on their nutritional status, and
- (iii) to study the impact of the CARE programme in tribal areas.

The data were collected on the dietary intake and clinical and biochemical status of school boys aged 7-12 years from Raipura and Baroda city. Comparative data were obtained on apparently well nourished upper class children. Some of the children were fed diets formulated in the Laboratory for a period of six months. Some students from Raipura were fed school lunch. The data obtained were analysed by using t-test, percentages etc.

Some of the major findings of the study were:-

- (i) The children in rural areas were physically stunted

as compared to the upper-class children. Their diets were deficient in calories, protein, vitamin A., Calcium and riboflavin.

(ii) The fed children showed superior increments of weight, height, serum protein, albumin and carotene as compared to the controls.

(iii) The beneficial effects of the CAR Programme were found to be much greater during adolescence.

(iv) A lunch providing cereals, legume and liberal amount of leafy vegetables could correct the basic deficiencies in the diet of school children.

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Group-II

Vol.III

Abstract-323

A STUDY OF ADJUSTMENT OF THE BLIND AND THE  
THE DEAF STUDENTS IN STANDARDS V, VI, VII of  
SPECIAL SCHOOLS IN KARNATAKA,

(Author- F. WILLIAMS, Bangalore- 1981)

The objectives of the study were:-

- (i) to find out and compare the extent of adjustment of the blind and its deaf children in standards V to VII.
- (ii) to find out the extent of their adjustment in the areas of home, school, peers, teacher and general,
- (iii) to find out the inter-relationship of adjustment in different areas,
- (iv) to find out the differences, if any between the adjustment of children in different standards and
- (v) to infer possible implications of adjustment of the blind and the deaf in the school.

The sample comprised all the special schools of Mysore, Hubli and Gulbarga and one school of Bangalore. Fifty one blind children and sixtyfive deaf children of classes V, VI, and VII formed the sample. The tool for data collection was the pre-adolescent adjustment scale(PA AS) of Pareek. The statistical used were measures of central tendency, standard deviation and product moment coefficient of correlation.

The major findings were:-

- (i) Both the blind and the deaf children had a good level of home adjustment. The blind children of classes VI and VII showed a higher degree of home adjustment than those of class V, whereas the deaf children of classes VI, and VII showed a lower adjusted in school than the deaf children. The level of school adjustment of the blind and the deaf was found to decrease as they moved from class V to VII.
- (iii) In the case of adjustment with peers, both the blind

and the deaf of class VII who showed a degree of adjustment below the average value.

(iv) Both the blind and the deaf had a low level of adjustment with their teachers.

(v) In the area of general adjustment, the blind showed better adjustment than the deaf in all the standards.

(vi) All the areas taken together, the blind showed better adjustment than the deaf.

(viii) In the case of the blind and the deaf, adjustment scores of all areas showed a high positive correlation suggesting a high inter-relationship between the adjustment levels in the five areas under study.

Group-II

Vol.III  
Abstract-356

A COMPARATIVE STUDY OF THE DEVELOPMENT OF PRIMARY  
EDUCATION IN RURAL AND URBAN AREAS IN THE STATE OF  
KARNATAKA

( Author- SREENIVASAN-. A, Mys. U., 1979

The study intended to trace and compare development trends in primary education in the rural and urban areas in the State of Karnataka during the period 1986-74 in respect of changes in (i) the enrolment situation, (ii) schooling facilities (iii) the teaching force and (iv) expenditure and to project the growth of primary education in Karnataka, in rural and urban areas for the decade 1975-85

To study the compare trends in respect of enrolment, schooling facilities, teaching force and expenditure of primary education, the entire period under study was divided into four specific intervals which approximately corresponded to the Five Year Plan periods. Time series data on the above mentioned aspects were collected from official records and documents. Trends in each of the four aspects dealt were analysed by computing a set of quantitative measures.

The major findings of the study were:- (i) A slightly higher annual rate of growth in enrolment was recorded in rural areas (7.48 percent) than in urban areas (6.89) (ii) the rates of enrolment growth of girls consistently exceeded that of boys during the different intervals in rural parts while the situations was vice-versa in the case of urban parts except during the interval IV. (iii) a gradual upward trend in respect of enrolment per 1000 population was noticed in the State (from 96-133) in rural areas (from 82 to 116) and in urban areas in the first two intervals (from 148 to 197) followed by a fall in which the third intervals (from 148 to 197) followed by a fall in the third interval and again an increase in the fourth interval. (iv) Consistently higher enrolment of boys per 1000 population than that in the case of girls was noticed. Urban parts recorded a much smaller difference than rural areas. (v) A gradual increase in primary enrolment ratio (PER) was noticed in the State and in rural and urban parts. (vi) The PER for boys was consistently more than that for girls in the State.

and in the rural and urban parts as well.

(vii) The average annual rate of increase in the number of schools decreased from interval to interval in the state as well as in urban and rural parts.

(viii) the rate of increase in the number of primary schools was not tune with the rate of increase in the enrolment. (ix) the average size of the primary

school had gradually increased in the state as a whole, and in rural and urban parts as well. (x) A marked

improvement in the availability of primary schools from the point of view of serving smaller geographical units was there in the state and in urban and rural parts,

and it was more marked in the rural parts than in urban parts. (xi) Though the percentage of higher

primary schools increased in the state and urban and rural areas, the increase was due to the marked in urban parts than in the rural parts of the State.

(xii) the rate of supply of teachers in primary schools was not in tune with the rate of increase in enrolment in the State as well as in urban and rural parts.

(xiii) the recurring cost per pupil enrolled in primary schools increased in the state and in urban and rural areas and it was higher in urban areas than in rural areas.

155-334-511 (11x)  
Group-II

Volume-III  
Abstract-522

FOSTERING COGNITIVE DEVELOPMENT IN FIRST  
STANDARD PUPILS-AN EXPERIMENTAL STUDY

( Author- T. PADMINI, Ph.D., Edu., Mys U., 1950)

The main objective of the study was to develop and try out experimentally a programme for fostering cognitive development in first standard pupils. The additional objectives of the study aimed at :  
(i) The initial level of cognitive development status to the socio-economic status and pre-school education of the pupils.

(ii) The gains in cognitive development status to the factors of age, sex, pre-school education, socio-economic status, institutional variations and intelligence of experimental group pupils and

(iii) The final level of cognitive development status to the academic achievements of both experimental and control group pupils.

The solemon four group design was employed for the experiment with the experimental groups, one pretested and the other non-pretested, and two control groups, one pretested and one non pretested. One hundred and twenty pupils studying in Standard I with Kannada as their mother tongue selected from five primary schools in Mysore city constituted the total sample for the study. They were randomly divided into two equal groups, experimental and control, in each school each being further split into two halves in a systematic order to form the pretested and non-pretested sub-groups. After the pretest the two experimental groups were given the experimental treatment consisting of the programme designed for fostering cognitive development, while the two control groups were allowed to undergo normal school activities during the period. The action programme which was based on piagetian theory of cognitive development consisted of a large number of instructional situations focussed on



selected cognitive concepts such as length, area, volume, weight, belongingness, spatial relations and temporal relations and involving cognitive operations such as identification, generalisation, comparison, discrimination as appropriate to the age group five to seven designed after having discussions with teachers and psychologists and an initial tryout. These activities were grouped and organised into forty sessions of thirty to forty minutes each. The experimental groups received the action programme in two sessions per week extended over a period of six months. The posttest was given to all the four groups at the end of the experiment. The various tools used in the study were the Mysore Cognitive Capabilities Test (Padmini and Nayar) which was administered both at the beginning and at the end of the experiment, WISC, the revised Socio-Economic Status Scale (Urban of Kuppasmany) and the final examination report of students in their respective schools for measuring academic achievement. The t-test, analysis of variance, analysis of covariance, chi-square test and contingency coefficient were used to analyse the data.

There were no significant initial differences in cognitive development status between the pretested experimental and control groups. There was no pretest sensitization favouring greater gains from the special action programme.

The findings of the study were ;

- (i) The experimental group was significantly better than the control group on cognitive development status at the end of the experiment.
- (ii) Sex differences were not significant in respect of gains in cognitive development status.
- (iii) The age level of experimental group pupils within the range studied did not significantly affect the experimental treatment.

- (iv) Cognitive development status was positively related to socio-economic status but not related to pre school education.
- (v) Differences in cognitive development status gains of the experimental group in relation to intelligence were significant.
- (vi) Variation in institutions did not affect gains in cognitive development status.
- (vii) Significant relationship existed between the cognitive development status and the academic achievement.

HISTORY AND PROBLEMS OF PRIMARY EDUCATION IN KERALA, PH.D.  
EDU., KER, U, 1969

(G. KAMALAMMA)

The objective was to study the major problems affecting primary education in the state.

The source of data for tracing the history were gathered from government reports, state manuals, gazetters and literature in Malayalam. Some folk songs of Malabar were also analysed. A schedule was used as a tool in the study of the problems. The schedule was administered in seventy schools in the state taking a one percent sample from the lower primary schools in the state. To supplement the data collected by means of the schedule, interview and observation were also used. This study was limited to the classes one to four of primary stage of education.

The study revealed that

- (i) it is the only state which has achieved the aim of hundred percent enrolment of children in the age-group six to eleven and Kerala is in the most favourable position to reach the goal laid down that by 1975, there should be free and compulsory education for all children upto the age of fourteen;
- (ii) the majority of government schools selected for study have no adequate enclosed area as per Kerala education rules;
- (iii) play grounds, sanitary arrangements, drinking water facilities are unsatisfactory;
- (iv) provision of special teachers is unsatisfactory in almost all the schools;
- (v) very few teachers have taken advantage of refresher courses and inservice training;
- (vi) inspite of many practical difficulties, the number of children benefitted by the noon-feeding programme is remarkable in the state;
- (vii) although the expenditure in primary education has risen very high the headmasters are against the idea of adopting the shift system as a means to reduce expenditure;

- (viii) the curriculum followed in the primary classes is not liked by the majority of headmasters;
- (ix) the overcrowding of school subjects and the lack of systematic arrangements of the curriculum are considered as the most serious drawbacks of the present curriculum;
- (x) frequent inspection by the headmasters are preferred to the annual inspection by assistant educational officer;
- (xi) the government has succeeded very much in overcoming the problems of wastage and stagnation; and
- (xii) stagnation is more in grades I and II than in others which is due to the lower admission age in class I;
- (xiii) headmasters of government schools did not favour the idea of participation in school administration. A new venture has to be made in solving the problems. The teacher-pupil ratio must be lowered and provisions should be made to appoint more women teachers. Teachers must be given refresher courses. The noon-feeding programme should be transferred from the headmasters. Local participation must be sought for constructing new sheds or temporary buildings. The work load of Assistant Educational Officers (A.E.O.s) must be reduced to enable them to pay frequent visits of the schools under their control. Refresher course must be conducted for headmasters and A.E.O.s for efficient supervision. Incomplete primary school must be abolished to prevent wastage and stagnation to a great extent.

GROUP - 158

VOLUME -1  
ABSTRACT -158

A STUDY ON THE EFFECT OF N.C.C. TRAINING ON PHYSICAL GROWTH, ADJUSTMENT, ACADEMIC ACHIEVEMENT AND CERTAIN PERSONALITY TRAITS OF HIGH SCHOOL PUPILS IN KARALA STATE. PH.D. EDU., KER. U., 1972.

(R.S. NAIR)

The main objective of the study was to assess the effect of N.C.C. training on physical growth, adjustment, academic achievement and certain personality traits of high school pupils. The hypotheses tested were-

- (i) N.C.C. training has significant influence on the physical growth and development of secondary school pupils;
- (ii) N.C.C. training has a significant influence on the development of ability for adjustment of secondary school pupils;
- (iii) N.C.C. training helps to improve significantly the academic achievement; and
- (iv) N.C.C. training has a significant effect on the development of certain personality traits.

The sample consisted of students of standard VIII from all high schools having N.C.C. troops in Trivandrum district in 1963.64. A controlled group was selected by having a matched pair for each pupil in the experimental group on the basis of age, school achievement, socio-economic status and teaching-learning situations. In all, 240 matched pairs were included. Only the experimental group was exposed to N.C.C. training. After two years, assessment of both the groups was made with regard to height weight, measurement of chest, and measurement of the hand around biceps muscles. The Bell's adjustment inventory (student form) was adopted and translated into Malayalam. The reliability was calculated using the Hoyt's method. The validity was established by correlating the scores on the inventory with teachers' ratings and by the use of critical ratio. The adjustment of pupils was measured using this inventory. The academic achievement was taken from the quarterly examination marks. The personality traits, namely, leadership qualities, integrity, sociability, persistence, emotional stability, attitude to school, self-confidence, assertiveness, attention to details, and concentration were measured by using rating scales. The statistical techniques used in the analysis of the results included descriptive statistics, coefficient of correlation and

C r  
critical ratio. Factor analysis of the variables was also made by using centroid method.

The following were major findings:

- (i) significant gain in physical development, adjustment, achievement in English, general science and social studies and personality traits was found in experimental group;
- (ii) no significant difference was found in the achievement in mathematics and Hindi in both the groups; and
- (iii) the factor patterns were almost identical for both the groups in the initial measurement but in the final measurement the factor patterns of the experimental group contained five significant factors whereas the controlled group contained only three factors. The result of factor analysis showed that the adjustment of individuals in all areas was considerably improved in the case of experimental group.

A DIAGNOSTIC STUDY OF THE DIFFICULTIES OF PUPILS IN THE SCHOOLS OF KERALA IN LEARNING HINDI, PH.D. EDU., KER. U. 1972.

(M.M. GOMATHY NMAAG)

The present study was made with an overall approach to the specific weak points among various linguistic areas in Hindi.

The study consisted of two parts;

- (i) linguistic analysis and
- (ii) analysis of conditions that contributed to backwardness in Hindi. Linguistic analysis was carried through -
  - (a) a diagnostic test to locate specific difficulties of pupils,
  - (b) process and product analysis of handwriting and spelling errors,
  - (c) eliciting the responses of teachers and pupils through separate questionnaires and
  - (d) observation and interview. The diagnostic test having lexical and grammatical items alongwith certain language skills testable through a written test, included twentyseven subjects. It was administered to 600 pupils from fifteen schools representing different zones, sexes, localities and managements. The questionnaires to teachers were answered by 229 Hindi teachers from different parts of the state. For analysing spelling and product errors in handwriting, 222 boys and 225 girls were studied, and for studying the process errors in handwriting fifty pupils were closely observed when they were engaged in writing. The test had its split-half reliability coefficient equal to .84, and it had curricular and construct validity. After applying the diagnostic test, twenty-seven areas of difficulty were located, of which two areas - translation and voice - were taken for detailed diagnostic analysis. For this purpose, the answers of one hundred pupils with equal number of boys and girls were taken. The questionnaires to teachers were intended to elicit details regarding methodological factors, administrative

factors, curriculum factors, attitudinal factors, etc.

The major findings of the study were:-

- (i) relative difficulty among twentyseven different linguistic had been identified by the diagnostic test and it showed in general that most pupils had hardly gone beyond the basic stage in Hindi,
- (ii) subsequent analytical study of errors, specially in respect of translation and voice, as also analysis of errors in spelling revealed serious difficulties of the pupils in learning Hindi;
- (iii) pupils who had the disadvantages in a number of personal factors and home conditions scores significantly less than the others;
- (iv) a vast majority of teachers (nearly 76 percent) was of the opinion that the periods allotted for Hindi were not sufficient;
- (v) many pupils were also of the same opinion;
- (vi) method of teaching Hindi was not adequate and interesting;
- (vii) according to teachers, the major reason why pupils did not like learning Hindi was that it was not given due importance while allotting periods, and that the pupils were not aware of the benefits of learning the language;
- (viii) parents discouraged pupils in learning Hindi, the foremost reason for parental discouragement being that learning Hindi would hinder the growth of Malayalam and that the importance of English would go down;
- (ix) most of the teachers opined that the need evaluation approach was not suitable for languages;
- (x) different ways to give extra time to backward pupils were adopted only by an average of 10 percent of teachers; and
- (xi) among the four-fold skills in learning a language, teachers gave more importance to listening than to speaking and reading, and least weightage to writing.



Group-I

Vol.III  
Abstract- 767

A CRITICAL ANALYSIS OF THE NEW MATHEMATICS  
SYLLABUS AND TEXTBOOKS USED IN THE UPPER PRIMARY  
CLASSES IN KERALA.

(Author- K.R. Gopalkrishnan, Ph.D. Edu., Ker. U., 1977)

The main objectives of the study were:-

- (i) to find out how far the syllabus prescribed in mathematics was adequate in the light of the main qualities expected of textbooks.,
- (ii) to find out the constraints that effect the implementation of the current syllabus.
- (iii) to attempt a comparative study of the current syllabus (1970-73) with that of the immediate preceding years,
- (iv) to locate areas or topics to be deleted from and or added to the syllabus under study, and
- (v) to find out how the syllabus in mathematics prescribed for the Kerala schools was comparable with that of advanced countries.

The main tools used in the study were questionnaire and interviews. A sample of 1500 teachers from 250 schools was selected for the study. Interviews were carried out with selected number of parents, students, educational experts and teachers.

The major findings of the study were:

- (i) Pre-determined percentage of promotion, over-crowding in classrooms, low socio-economic status of parents, frequent strikes and agitations, poor academic background of students, lack of adequate foundation in mathematics, lack of parental interest, lack of interest on the part of the students and lack of textbooks dominated among the causes that adversely affected the introduction of new mathematics
- (ii) The structure and regour of the mathematics textbooks were appropriate. The rate of introduction of new terms was uneven, typographical errors, errors due to carelessness and real errors were found here and there in the textbooks. Almost all topics needed gradation. The revision exercises, diagnostic tests and general exercises were in in general appropriate.

The inclusion of enrichment programmes was a good feature of the textbooks but the diagrams were not satisfactory. There was some disagreement between the syllabus and the textbooks due to omission of certain topics and sub-units.

(iii) The syllabus of 1970-73 was better than that of immediately preceding years.

(iv) The coverage of content of textbooks of Kerala was not at par with those of the SMSG and the SMF series; the Kerala syllabus differed from even the NCERT syllabus.

(v) The additions to the syllabus suggested by the respondents were more exercises suitable for problems related to life, English equivalents of new terms and like history and important events of mathematicians. The deletions suggested included discovering patterns, enrichment programmes, difficult problems and fundamental laws.

Group-II

Volume III  
Abstract 786

USING ENVIRONMENTAL POTENTIALITIES IN  
EDUCATION.

(Author-N. V. Manuel, Deptt. of Edu., Ker. U.,  
1982(UGC financed)

The objectives of the study were :

- (i) to analyse the textbooks in environmental studies of NCERT and of some state systems from the point of view of components which might facilitate or hinder genuine environmental approach
- (ii) to analyse some texts in areas other than what has been formally designated as environmental studies from the point of view of potentialities for environmental education (EE),
- (iii) to analyse some worthwhile EE models in India and abroad and other relevant materials from the point of view of developing a functional theory of EE,
- (iv) to identify some typical resources other than textbooks which can be useful for EE,
- (v) to develop some models for tapping the hidden curriculum in the ordinary environmental situations, and
- (vi) to develop some models for EE representing a reasonable compromise between EE theory and the practical conditions in the majority of Indian schools and nonformal educational content.

The materials analysed in detail included the relevant textbooks (classes III to V) at national level, i. Kerala and Tamil Nadu. A few books from other states, at the same level, and a few books in languages were also analysed. Collateral materials from USA, USSR, UK, France Unesco and other developed systems were also analysed. In addition to analysis and critical appraisal, interviews, observation and focussed group discussion with teachers, nonformal science education workers and administrative officers were conducted.



The main findings were :

- (i) Very few genuine EE type activities, as understood in modern developed systems, seem to be undertaken in the primary schools.
- (ii) The effective lead materials (textbooks) at national level seemed to have some worthy aspects such as process approach in science, activation, some directives to observation and visits, stimulating questions with open tables to fill in the answers, thought excursion through the country profusely illustrated with pictures (in history portions), clear verbal processing and the like.
- (iii) National level textbooks lacked the higher specifications commonly adopted in modern EE procedures and in open, multidisciplinary approaches to the environment. Defects such as preempting investigation (by suggesting the answers), premature precision (overlooking the initial phase of remance in environmental exploration), simulations and artificial situations even where natural situations were available in the environment, defective concept processing (particularly in astronomy, physics, geology and geography), overuse of technical terms (in food and health), non-recognition of the time dimension in real observations in astronomy, botany, etc., non-recognition of the developments in genetic epistemology, adoption of spectator approach where participant approach was possible, insufficient respect to work culture.
- (iv) NCERT's curriculum framework which had obviously guided the textbook gave negative guidelines (what EE is not) but distinct positive guidelines were lacking. The lead paper by NCERT of December 1981 on EE, available after the books, was an analysis of conference reports (from Stockholm) and some generalised theory, but not on modern EE curricula in transaction. An upward environment as reference point rather than actual ground level EE material production process also seemed to be reflected.
- (v) As regards state level textbooks, some of the drawbacks of the national level books were carried over and some of the merits seemed to have been missed like exploring open exploratory tables by closed pre-empting environmental exploration, reducing investigatory specification further loading



of information imposition of premature classical terminology (The meta language used was based on Sanskrit in Kerala and classical Tamil in Tamil Nadu).

(vi) The content loading of science in Tamil Nadu was much less while activities were plentiful yet it was formal science and not EE. The social studies portion in both the southern states was heavily loaded with facts.

(vii) Tamil Nadu also produced taluk-level and district-level books for geography, which did reflect concern about starting from the ground.

(viii) Tamil Nadu books made a reference to the ancient Sangam classification of land into five, but it was a formal, symbolic and a looking back reference. The difference in titles suggested a heavy carry-over of content and approaches from the past, even at the national level.

(ix) Theoretical analysis of environmental knowing, way-finding in a natural and man-made environment, cognitive mapping, spatial encoding and linguistic encoding, anticipation of alternative futures and Piagetian studies conducted in larger environments provided insight for organizing EE programmes.

(x) Work at the Vikram Sarabhai Community Science Centre, Ahmedabad, Kerala Sastra Sahitya Parishad and workshops conducted with British Council collaboration in Tamil Nadu and Kerala were instances of functional EE starting from the ground environment and developing sophisticated and useful constructs.

(xi) Some relevant models representing a synthesis between modern EE theory and the local context and culture were suggested.





AN ENQUIRY INTO THE TEACHING OF BIOLOGY IN THE  
UPPER PRIMARY SCHOOLS OF KERALA.

( Author- G. Srinivasan, Ph.D. Edu., Ker. U., 1978

The important objectives of the study were

(i) to identify topics to be deleted from the biology syllabus of standards VI and VII from the point of view of pupils.

(ii) to identify activities which are found rather difficult by pupils of standards VI and VII

(iii) to identify the techniques of teaching adopted by teachers for teaching biology in the upper primary classes in the Trivandrum district.

(iv) identify the objectives aimed at by the teachers of biology of the upper primary stage,

(v) to find out the level of attainment of pupils of standard VII in biology.

Twelve schools were selected on a stratified random basis for the study. Three classes each from standards VI and VII of the schools were observed by the investigator for collecting information about the method of teaching biology in those classes. An achievement test was administered to 500 pupils studying in standard VII of the selected schools towards the end of the academic year. A group of fifty experts in the field of biology education were interviewed to collect their opinion about the teaching of biology in the primary classes.

The major findings were:-

(i) The topics identified as very difficult by the pupils of standard VI were the structure of the cell, protozoa and classification of plants and animals.

(ii) Lack of facilities in schools, lack of mastery of subject matter on the part of the teachers, lack of experimentation in the classroom, overdependence of teachers on textbooks, overcrowding in classroom, were listed by pupils as some of the reasons for finding biology and difficult subject.

(iii) The ability to analyse materials by simple techniques had not been developed among the pupils to a desired extent.

(iv) Most teachers resorted to lecture demonstration method in the teaching of biology in the upper primary classes.

(v) The objectives aimed at by the teachers in teaching biology at the upper primary level were oral and written expression in science, functional knowledge of facts and concepts, interest in scientific hobbies and interest in surroundings.

(v) The pupils found it difficult to draw diagrams and to mark parts thereof.

(vi) The achievement level of pupils was not quite satisfactory. Even in the case of simple skills, adequate mastery was not gained by pupils.

(vii) The teachers, in general, failed to develop scientific attitude among pupils of upper primary classes.

(viii) There was high positive correlation between expected realisability and actual realisation in regard to recognition and appreciation type objectives;

Group-II

Vol.III

Abstract-890

ASSESSMENT OF ENTERING BEHAVIOUR IN ENGLISH  
OF PUPILS OF STANDARD VIII

( Augher- Ram Kumar.. Ker.U., 1982)

The study was intended to obtain the repertory of verbal associations in the English language with which pupils enter the learning situation in standard VIII. The main objectives were (i) to assess attainment in the different component skills of written English of a representative sample of pupils of standard VIII(ii) to identify and classify errors, if any, committed by the sample (iii) to compare relevant sub-groups of the sample on the present status of the students' knowledge and skill.

The tools used were Word Fluency Test, free composition passage of about fifteen sentences written by the pupils, entering behaviours in English test paper for the study which included ten component skills of writing English. The sample for the study comprised 600 pupils who had just entered standard VIII, selected from fourteen schools of Trivandrum district. It included 300 urban and 300 rural pupils and 279 boys and girls. The data obtained from the administration

of the three tools were analysed separately. Mean and SD were calculated for vocabulary scores and for relevant sub-groups were compared through testing the significance of the differences between the means. Frequency tabulation was made of errors to identify types and assess extent of incidence. Chi-square values were calculated between correct and incorrect responses for each component of entering behaviour test.

The main findings were: (i) the Vocabulary attainment pupils having significantly higher attainment than girls and rural pupils, respectively. (ii) Only eleven percent of the sample 600 could write even one sentence correctly, when the range of words for sentences was between four and seven only, and the maximum number of sentences written was five. (iii) The types of errors were not very large and the possibilities for committing mistakes were minimum because of the pupils inability to write. (iv) Four types of errors viz. spelling, balancing of sentences, punctuation and wrong word substitution had the highest incidence. (v) on these four types of errors, boys and urban pupils, had significantly lower number of incorrect responses. (vi) Proficiency was low in the use of five component skills, viz., use of phrases, prepositions, degrees of comparison, plurals and combining sentences. (vii) Proficiency was general in use of articles, opposites and the 'ing' forms. (viii) not even one pupil could correctly punctuate the given single sentences.

DIFFERENTIAL APTITUDE TESTING PROJECT, COLLEGE OF  
EDUCATIONAL PSYCHOLOGY AND GUIDANCE, JABALPUR, 1962.  
(MOE FINANCED)

(N.C.S. IAC)

These tests were developed to provide an integrated scientific and well-standardised procedure for measuring the aptitudes of boys in grade VIII of higher secondary schools, in order to predict their performance in educational courses offered by secondary schools.

The entire battery of differential aptitude test contains seven subtests, viz., numerical ability, numerical reasoning ability, space relations ability, linguistic ability, verbal reasoning ability, nonverbal reasoning ability and perceptual speed. An experimental tryout of these tests was undertaken. Item analysis of each test was conducted separately. The test was administered to a sample of 400 boys belonging to the class VIII of schools of Jabalpur, Saugar, Khandwa, Raipur and Bilaspur. The item difficulty was first expressed as percentage of passes and later converted into sigma values. The items were then selected so as to avoid concentration of items at any particular level of difficulty and mean of the sigma values was as near zero as possible. Item consistency was expressed as a coefficient derived from a comparison of the percentage passing the item concerned from among the twentyseven percent of the highest and twentyseven percent of the lowest individuals in the tryout sample. Flanagan's table was used for this purpose. After selecting items for the test, another tryout administration of the tests was conducted for the purpose of fixing appropriate time limit for each of the test. The total working time for the entire battery of tests was set to be 162 minutes. These tests were administered to 800 students of standard VIII selected at random from eighteen schools of Madhya Pradesh.

Percentile ranks and percentile age norms for age groups of thirteen, fourteen and fifteen were computed. The reliability coefficient of each subtest were found out separately by split-half method and were found to be .95 for linguistic ability test, .92 for space relations tests, .91 for nonverbal reasoning test, .88 for verbal reasoning test and .90 for numerical reasoning test. An attempt was made to observe the effectiveness of the test battery in revealing intra-individual differences in cognitive abilities. This was done by plotting test profiles of fifty testees taken at random from the entire standardisation sample. Differentiation of abilities was clearly evident in the profiles.



GROUP II

VOLUME II  
ABSTRACT-162

A COMPARATIVE STUDY OF INTERPERSONAL  
RELATIONS IN EFFECTIVE AND INEFFECTIVE  
CLASSROOM GROUPS. PH.D. EDU., VIK. U.,  
1973.

(Author: J.J.R. Vyathit)

This investigation was mainly concerned with the comparison of interpersonal relations in the effective and ineffective classroom groups with regard to sociometric cohesiveness, social distances, social perception, social cohesiveness and social attitudes of pupils towards their classroom groups and class teachers. The secondary aim was to evolve various instruments for the purpose of the study.

The tools devised for selection and differentiation of two types of classroom groups were: (i) the School Assessment Proforma, Form A; (ii) the School Assessment Proforma, Form B; (iii) Classroom Observation Schedules; and (iv) Achievement Tests in History for classes VII and VIII. The instruments for data gathering were: (i) Sociometric Test; (ii) Social Distance Scale; (iii) Guess Who Test; (iv) Classroom Group Cohesiveness Inventory; (v) Classroom Group Rating Scale; (vi) Class Teacher Rating Scale; and (vii) Teacher Pupil Relationship Test. Eighteen effective and eighteen ineffective classroom groups were selected for the final analysis. The number of pupils in effective type for boys', girls' and coeducational classroom groups included in the sample were 198, 269 and 169 respectively, whereas the corresponding samples of pupils in ineffective type were 201, 124 and 145 respectively. In addition to pupils of eighteen effective and eighteen ineffective classroom groups, fiftyfive classroom teachers including thirtyone males and twentyfour females were also included in the investigation. Classroom groups along with their class teachers were selected from various middle schools of Bhopal city. The data were analysed by means of factorial analysis and employing chi-square technique.

The major findings of the study were: (i) the interpersonal relations in effective classroom groups were found to be superior as compared to those of ineffective ones; (ii) the social acceptability for each other as playmate in the effective classroom groups was superior to that in ineffective ones; (iii) the number of stars was larger in effective classroom groups than in ineffective ones; (iv) the number of neglectees and isolates was smaller in effective classroom groups than in ineffective ones; (v) coeducational classroom groups had better interpersonal relations than boys' or girls' ones for playmate criterion only; similarly, the pupils of coeducational classroom groups had better social attitudes towards their teachers than those of girls' or boys' ones; the perception of pupils of one another in coeducational classroom groups was also superior to that of girls' and boys' ones; the number of isolates was smaller in coeducational classroom groups than in boys' and girls' classrooms for private-mate criterion only; (vi) the number of stars in the girls' classroom groups was smaller than that of boys' and coeducational ones for private-mate criterion only.



GROUP II

VOLUME II  
ABSTRACT-393

AN EVALUATION OF NATIONALIZED HINDI  
TEXT BOOKS (CLASSES I THROUGH VIII)  
OF MADHYA PRADESH, PH.D. EDU., INDORE  
U., 1976.

(Author: U.S. Choudhary)

The main objectives of the study were: (i) to analyse the strength and weakness of the nationalized Hindi language textbooks, i.e., Jai Bharathi series; and (ii) to evaluate the textbooks in terms of values, needs, themes and questions with the help of the opinions of the teachers, students and experts.

Thirtythree rural and seven urban middle schools of Indore district were randomly selected. Eight teachers and eight students (representing every class) were selected from every school to fill the questionnaire. Thus 320 teachers and 320 students from forty schools formed the final sample. The evaluation of the textbooks was done by a group of fifty experts. The classification of 711 textbooks were referred to a group of four judges. Ten questionnaires, one for the teachers and other for students were designed and their reliabilities were found out. With the help of these tools evaluation scores of textbooks from both the groups were obtained. Occurrence of values and needs in the textbooks was done through content analysis and was compared with the scale of values obtained with the help of experts. Similarly the 'likings' of the students for the themes, in terms of yes-responses, were compared with the frequencies of themes occurring in the textbooks. To know the cognitive level of questions given at the end of the chapters, they were classified into seven hierarchical categories of Bloom-Sanders' taxonomy. The data were descriptively and statistically analysed.

The main conclusions of the study were: (i) The students had a more favourable opinion of all the eight textbooks than their teachers. (ii) There was fairly good agreement between the socio-cultural values reflected in the textbooks of classes I through IV and the values recommended by the experts for these classes. There was no agreement between the values presented in the textbooks of class V to VIII and the values recommended by the experts for these classes. (iii) There was no correspondence between children's needs presented in the textbooks of classes I through VIII and the needs recommended by the experts for these textbooks. (iv) There was no relationship between the themes presented in the textbooks of classes I through VIII and the themes liked by the students of these classes. (v) The questions given in the exercises of the textbooks were predominantly at low cognitive level - 51,476 per cent of questions were of memory type and only 1,969 per cent of questions belonged to synthesis category. (vi) The female teachers and female students had more favourable opinion of the textbooks than their counterparts. (vii) There was no rural-urban differences in the opinions of the teachers or the students regarding the textbooks.

IMPACT OF BILINGUALISM ON THE PROGRESS OF  
CHILDREN IN PRIMARY SCHOOLS IN RURAL AREAS,  
G.K. INSTITUTE OF EDUCATION, GARGOTI,  
1967. (NCERT FINANCED)

(Author: D.V. Chickermane)

The objectives of the study were: (i) to find out whether different types of bilingualism affect the progress of unilingual children, (ii) to determine the stage of education at which bilingualism affects the progress of children; and (iii) to suggest remedial measures to overcome deficiencies of children whose progress is affected adversely by bilingualism of a particular type.

The sample was selected from bilingual areas on the border of the two states, Maharashtra and Mysore. A subsidiary area was also taken on the border of Maharashtra and Gujarat. The selected sample consisted of: (i) Bennadi area, where Kannada and Marathi were equally prominent; (ii) Nippani area, where Marathi was the school language and also the local language, and (iii) Halkarni area, where Kannada was the home language and also the local language, while Marathi was the school language for Kannada children. Data were collected using an achievement test and through interviews and discussions with the teachers who handled children in bilingual classes. The test was administered at two levels, lower primary and higher primary. The test was constructed and standardised by the Institute. The difficulty value of items was the Z-score corresponding to the percentage on the normal curve. Tetrachoric correlations between items and the test as a whole were computed and items with low correlation were deleted. Finally, the tests were administered to children in grade IV as well as grade VII.

The major findings of the study were: (i) three situations, namely, the home, the environment, and the school influenced the language development of a bilingual child; (ii) of these three, the environmental influence was the deciding factor and was more powerful than the school or even home influence; (iii) when the language in the environment was identical with that of the home, there was no perceptible effect of bilingualism on retardation of school progress; and (iv) when the environmental language differed from school language, children felt handicapped in acquiring a mastery over the school language.



GROUP II

VOLUME II  
ABSTRACT-659

MODERN TRENDS IN ELEMENTARY EDUCATION,  
PH.D. EDU., RSU, 1968.

(Author: F. Chaudhari)

The study aimed at finding out good practices of the present day elementary schools and to enumerate critically the present trends in methods of teaching, curriculum, finances and other related factors concerning elementary education.

The sources of the data were annual reports and other publications of Ministry of Education, DEPSE and NCERT. Opinions of eminent educationists, district education officers, deputy and assistant directors of education in charge of elementary education were also obtained.

The major findings of the study were as follows:  
(i) the elementary education was concerned with vital areas of life such as health, family life, communication and cooperative living; (ii) the enrolment at the elementary level was constantly on an increase; (iii) changes in the curriculum of elementary schools had been brought about as a result of changes in social and economic life as well as advances in science; (iv) emphasis was put upon acquisition of skills and abilities rather than knowledge; (v) there were corresponding changes in teaching methods and points of focus, e.g., in teaching of arithmetic emphasis was on functional and operative arithmetic; (vi) developed as well as developing nations were becoming increasingly conscious to provide compulsory, free and longer duration of elementary education to all the children; (vii) the need for the improvement of elementary teachers through planned and quality supervision was being felt more and more; (viii) elementary education was receiving more finance; (ix) facilities such as transport, mid-day meals, free supply of reading and writing materials, and health services were becoming more common; and (x) training programmes for elementary school teachers were becoming of longer duration and richer in content.



GROUP II

VOLUME II  
ABSTRACT-670

A STUDY OF INCIDENCE AND CAUSES OF WASTAGE  
AND STAGNATION IN PRIMARY SCHOOLS OF M.P.,  
JABALPUR, 1973. (GOVT. OF MADHYA PRADESH  
FINANCED)

(Author: Government College of Education,  
Jabalpur)

The purpose of the study was to determine the incidence of wastage and stagnation at the primary level in Madhya Pradesh and to diagnose the causal factors.

Students admitted in class I in the year 1964-65 for the first time, formed the cohort. The career of each member of the cohort was followed till he/she left school either after completing primary education or prematurely. Sample was drawn from 175 rural and urban primary schools spread over the whole of Madhya Pradesh. Thirtyseven basic training institutes were made data collection centres to collect data from five schools each. Data for estimation of the extent of wastage and stagnation were collected through a basic data sheet. For diagnosing the causal factors, three questionnaires - one for teachers and prominent persons, second for students and third for their parents - were administered. Pupils who left school without completing primary education were cases of wastage, and pupils who repeated any class were cases of stagnation.

Main findings of the study were: (i) percentage of cases of wastage among boys and girls were respectively fortytwo and fiftythree, while among scheduled tribes/castes girls it was seventy; (ii) only thirtyeight percent of boys and twentyeight percent of girls completed their primary education; (iii) percentage of wastage in urban schools was thirtyeight and in rural schools fiftyseven; (iv) highest percentage of wastage (sixtythree) was found among pupils from schools situated twenty kilometres away from a pucca road; (v) about seventy percent of pupils who dropped out did so before passing class II; (vi) overall percentage for stagnation was fifty, while for tribal

communities it was sixtyeight; and (vii) the following were regarded as the main causes of wastage and stagnation: (a) lack of basic facilities in schools, (b) lack of interest on the part of parents and pupils, (c) poverty, (d) large family, (e) early marriage, (f) necessity to do household work or to earn, (g) irregularity of teachers, and (h) teachers not using local dialect.



Group-II

Vol.III  
Abstract-317

PERSONALITY DEVELOPMENT OF CHILDREN IN RELATION  
TO CHILD REARING PRACTICES AMONG SOCIO-ECONOMIC  
CLASSES.

(Author- J. Tiwari., Ph.D. Psy, RSU., 1976)

The main purpose of the study were:-

- (i) to find out the socio-economic class difference in child-rearing practices and
- (ii) to find out the effect of different kinds of child-rearing practices on the personality development of children.

The sample of the study consisted of 303 hindu male children from Raipur City from the families having two to five children. The average age of the children was nine years. The tools used for data collection were the early school personality Questionnaire (Hindi) readopted and standardized by Lal, a socio-economic scale developed by the investigator and interview and observation schedules. The data were analysed by computing the mean, standard deviation, t-value, chi-square, analysis of variance and product moment coefficient of correlation.

The findings of the study were:-

- (i) The Upper-class mothers breast feed for a shorter period and started weaning earlier than middle and the lower class mothers. Bottle feeding was common in the case of upper class mothers, less common in case of the middle class mothers and absent in the case of lower class mothers.
- (ii) The upper class mothers started the toilet training of their children earlier but their children required longer time to be trained than the middle and the lower class children whereas the lower class children completed their toilet training earlier than the middle and upper class children.
- (iii) To prohibit the auto-erotic sex play of children

children.

(iii) to Prohibit the auto-erotic sex play of children the upper class mothers diverted the children's attention and used appropriate colthing while mothers belonging to middle and lower classes used prohibition and spanking.

(iv) The children of upper and middle classes were dependent and the mothers were over-attentive whereas dependency was not permissive towards the aggressive behaviour of their children while the lower class mothers were over attentive whereas dependency was not encouraged in the lower class families.

(v) The Upper and the middle class mothers were not permissive towards the aggressive behaviour of their children while the lower class mothers were highly permissive. The upper class mothers were found to giving much importance to neatness and orderliness; comparatively, they were strict about children's sleeping time and physical mobility and gave them freedom to do anything, go any where as contrast to the mothers of the other two classes.

(vi) The mothers of the middle class used reward and praise to teach the desired behaviour to their children whereas the lower class mothers used punitive methods.

(vii) The upperclass children were found to be more conscientious than the lower class children but less conscientious than the middle class-children.

(viii) The mothers of all the three SES classes favoured the sex role differences in child-rearing practices and praised their children if they maintained good sibling relationships. The Upper class children maintained better sibling and peer relations than the children of other two classes.

(ix) In middle class homes the father-child relationship were found to be more common than in the lower and upper class homes.

(x) In the upper and the lower class families mothers were responsible for decisions about the children's problems and financial policies; the same duties were performed by fathers in middle class families.

A STUDY OF GROWTH OF SCIENTIFIC CONCEPTS  
AMONG ELEMENTARY SCHOOL CHILDREN

(Author - Arya, J. P. Ph. D. Edu., Bhopal U., 1981)

The objectives of the investigation were: (i) to develop concept related criterion tasks on the concepts of weight, volume, classification and associative linking to study the growth and development of these concepts, (ii) to study the level of growth of conservation of mass and volume with regard to the variables of age and sex, (iii) to diagnose the nature of errors the students commit in responding to these tasks and to cluster them in a theoretical frame, (iv) to study changes, cross-sectionally, as they occur in the level of attainment of the scientific concepts with and without regard to sex, (v) to study, cross-sectionally, the nature and growth of classification and associative linking in elementary school children, with and without regard to their sex, and (vi) to diagnose the nature of confusions which the children display in dealing with classificatory problems and to cluster them in a theoretical frame.

The study was carried out on 200 students, twenty boys and twenty girls from each of the age levels 6+, 7+, 8+, 9+ and 10+ years. These 200 students were selected randomly from 360 students who came from average socio-economic background and were of average intelligence. The sample was selected from three schools which were under the same management and admitted children of employees drawn from all over India. Two Piagetian type tasks were developed for conservation of mass and conservation of volume; similarly, tasks were developed to study associative linking. Besides, Standard Progressive Matrices Test, Mill Hill Vocabulary Scale and school records were used to collect data. The data were analysed by computing mean, SD, coefficients of correlation, and t-tests.

The study revealed; (i) A sudden fall in the value of proportion of correct responses occurred from the age 8+ to 9+, however, errors indicated no definite points of confusions but only misconceptions in the development of the concept of conservation of mass. (ii) In the second stage, misconception of weight due to flattening

or thinning came in, and further in the third stage of dissolving the ball the concept of conservation of mass shifted from age cohort 8+ to 10+ (iii) In the case of conservation of volume, 25 per cent at 6+ to 62.5 per cent at 10+ age group conserved the concept but only a small percentage of students could attain the criterion of acceptability. (iv) In associative linking, the frequency of perceptible mode of characterization enhanced from 7+ to 8+ and then showed a fall from 8+ to 9+ and a consistent downward trend thenceafter. (v) The schools were found to have a definite impact upon the development of these modes of characterization. (vi) The children were found to attain resemblance sorting and consistent sorting by the age 6+, exhaustive sorting, and some and all by the age 7+, and multiple class membership and conservation of class hierarchy by the age 9+.

Group-II

Volume-III  
Abstract-421

ANXIETY IN ELEMENTARY SCHOOL CHILDREN:  
A STUDY OF SOME SELECTED ANTECEDENT AND  
CONSEQUENT BEHAVIOURAL CORRELATES

(Author - Bharathi, V.V., Ph.D. Home Sc.,SVU.,1980)

The main purpose of the study was to assess, qualitatively and quantitatively, the main and interactional effects of demographic and social class variables, parental attitudes, intra-familial dynamics and structure, on anxiety levels measured by a standard instrument. The demographic variables included age, sex and social class. The intra-family variables included family structure, tension balance between parents and parental attitudes. The consequent behavioural correlates included fears and dreams, speech and language functions.

A sample of 150 children (boys and girls) in the age group of 5 to 7 years was drawn from a population of children in elementary schools of Tirupati for initial studies. The sample was randomly chosen using multistage systematic sampling procedure. The sample for the final study consisted of 300 children (boys and girls) in the age group 5-7 years. There were equal number of boys and girls at each level (number x sex x age: 50x2x3). Anxiety was measured by OMAS. Social class level was evaluated by using the Socio-Economic Status Scale (Urban). Family structure and tension between parents were measured by Family Structure Tension Balance Questionnaire and parental attitudes by Parental Attitude Research Instrument (PARI). Dream experiences were evaluated by a dream check list. Speech and language functions were qualitatively and quantitatively studied by using taped samples of speech as primary data obtained in response to a test picture. The data were factor analysed by using principal component analysis and varimax solution and four factors were identified and further used in making comparisons.

The important findings of the study were: (i) Anxiety depended upon the combined influence of both demographic variables and the social class. (ii) Among the several

antecedent variables, the type of family structure and tension balance between parents were found to be crucial. (iii) Some parental attitudes were strongly associated with anxiety in children. (iv) The relationship between the dreams and anxiety was not clearly established. (v) High anxiety in children affected the speech functions. (vi) High anxiety affected the quality of language expression in children.

Group II

Volume III  
Abstract 576

CONSERVATION AND SCIENTIFIC CREATIVITY  
THROUGH CULTURES DURING THE PERIOD OF FORMAL  
OPERATION

(Author J.F. Shukla, Ph.D. Sy., RSU, 1980)

The major objectives of the present study were :

- (i) to construct and standardize a test of scientific creativity
- (ii) to find out the relationship between different components of scientific creativity and the conservation of mass, weight and volume of solid and liquid and
- (iii) to find out the difference in the scientific creativity scores and the conservation of substances scores of the various groups stratified in terms of socio economic status, sex, schooling, age, and culture.

A sample of 1,020 students, studying in Classes VI, VII and VIII in various schools of Raipur and Rajanandgaon districts of Madhya Pradesh was randomly selected. The first phase dealt with the construction and standardization of the test of scientific creativity. The test measured only six SI factors from twenty eight enlisted by Guilford, i.e. EIC, DMT, DMU, NMT, CMI and CFR. Four subtests for the test were the consequences test, the unusual uses test, the remote association test and just think why test. The reliability of the test was determined by the test-retest method, which ranged from 0.65 to 0.77 for different subjects. The content, construct, concurrent and factorial validities were established. The concurrent validity against Mehdi's Test of Creativity ranged from 0.56 to 0.69 and the inter-factor correlations among the different dimensions of creativity ranged from 0.95 to 0.99. The second phase dealt with the correlational aspect of the study. The instruments used by Piagetians for studying solid and liquid as the substances of mass, weight, and volume and the Test of Scientific Creativity (Shukla) were used for this phase.

The findings were ;

- (i) All the indices of relationship between the different dimensions of scientific creativity, namely, fluency, flexibility, originality, and global scores in scientific creativity, and conservation in mass, weight and volume of solid and liquid were found to be significant.
- (ii) The means on the various dimensions of scientific creativity as well as on the conservation in mass and liquid of the tribal students were invariably lower than those of the urban, rural and refugee Bengali students.
- (iii) No significant differences were found among the students of different age group, different grade and sex as regards the various dimensions of scientific creativity and conservation in mass, volume and weight of solid and liquid.
- (iv) On all the dimensions of scientific creativity and conservation in weight of solid and liquid and in mass of liquid, the students of middle socio-economic status scored significantly higher than those of the lower socio-economic status.



Group-II

Vol.III  
Abstract-813

A RESEARCH STUDY IN ENVIRONMENTAL APPROACH OF TEACHING  
AT PRIMARY LEVEL,

( Author- A.D. Sharma, Sonam A.B. and J.S. Rajput)

The objectives of the project were (i) to study the existing awareness towards the scientific and social environment in children and (ii) to identify the available community resources which can be gainfully utilised for teaching.

The study was conducted in three distinct phases. In the first phase, the M.P. State curriculum for classes III and IV was redesigned to build scope for environmental approach of environmental awareness test. The third phase was the redesigned curriculum was assessed on environmental awareness and achievement in sciences. In the second phase, the draft test was administered on 140 children from classes III and IV subsequently on 200 children from the same classes but from two other schools, and a third time on 275 children from another two schools. The fifty item had a reliability of 0.80 for each item the difficulty index ranged between twenty five percent to seventy percent and a discrimination index was more than 0.40. The experiment in phase was conducted on 197 students from two schools in Bhopal, 102 students belonged to class IV and ninety class III.

(two sections each) were in the experimental age group and the rest in the control group.

Mean, standard deviation and tests were applied for data analysis and hypothesis verification.

The study revealed:- (i) only one of the four groups (2 schools x 2 classes) were significantly different on environmental awareness at pretest stage, whereas at the post test stage two experimental groups were significantly better than the control group. (ii) the differences between the experimental group and the control group on a traditional achievement test was not significant.

Group-II

Vol. III  
Abstract- 754

NUTRITION HEALTH EDUCATION AND ENVIRONMENTAL  
SANITATION IN PRIMARY SCHOOLS ,

(Author- NCERT findings)

Objectives of the present project were  
(i) to ascertain the local condition and nutrition health and sanitation habits of experimental area  
(ii) to develop instructional material for students and teachers relevant to local environment (iii) to orient the educational supervisors and teacher educators of the area (iv) to train teachers-one each from the selected tribal/rural schools and (v) to implement the programme in selected schools and evaluate the impact of the programmes.

The project experimentation was carried out on eleven selected villages with the help of teachers ranging from thirtysix to thirtynine. Activities of the experimentation-participating teachers were to carry out a base line survey of five families, to introduce message in atleast forty families, to check the nutrition, health and sanitation habits of each family as per check list, evaluate the impact of the messages introduced in subsequent visits as per checklist and provide remedial suggestions, to help developing desirable practices in school children, observe behavioural changes during school hours and evaluate the progress as per checklist, and maintain the records of the health status of village as per proforma supplied. The entire experimentation was monitored through a three phased orientation programme. In the first programme, the teachers were oriented to the task, subsequent programmes were devoted to review the progress, discuss and solve the problems and so on. The teachers reported their evaluation data in six trials-each at an interval of a fortnight. The data thus generated were treated qualitatively; however, mean and standard deviation were calculated for each item for the first and the sixth trial and the differences were tested for significance by using t-test. The main findings were:-

(i) the impact was observable in (a) awareness in the cleanliness of clothes, hand and feet, cutting of nails, (b) use of soap and waste water in the kitchen garden, (c) the bathing habits-keeping a distance from the well, defecating habits - maintaining longer distance from the village using water in containers rather than ponds directly.

(d) preparation of food-using of starch and flour, washing of vegetables before cutting, taking green vegetables, etc.

(ii) The t-values were found significant between the first and the sixth trial on the primary school children with respect to cleanliness of teeth, tongue, nails, feet, spitting in spittoons, urinating in urinals, throwing garbage and waste into the dustbin or compost pit, washing hands and mouth before and after eating, and covering mouth and nose while coughing and sneezing.

(iii) The t-values were not significant with respect to cleanliness of eye, nose, ear and hands. (iv) For the community at large, improvements were found in all the twentyeight items. The percentage gains ranged from 0.30 percent to 62.73 percent. Highest gains were recorded in washing vegetables before cutting (62.73 percent), cooking food in sufficient water (58.63 percent), using leaves of carrot, radish etc. (49.07 percent), feeding child when sick (44.74 percent), keeping clothes clean (40.09 percent), the lowest gains were in covering the excreta with mud (0.30 percent), defecating in latrines (0.42 percent) and washing hands after defecation (0.94 percent).

Group- III

Vol. III  
Abstract-771

A STUDY OF ENVIRONMENTAL AWARENESS AMONG  
CHILDREN OF RURAL AND URBAN SCHOOLS AND NON-FORMAL  
EDUCATION CENTRE,

(Author V.P. Gupta and J.S. Grewal, and  
J.S. Rajput, RCE, Bhopal(M.P.))

The objectives of the study were:-

- (i) to know the components of environment in which children from rural and urban areas were lacking and the areas in which the students from both the streams were well acquainted,
- (ii) to compare the environmental awareness of school going children and children studying in nonformal education centre and
- (iii) to suggest means for developing environment based curriculum for universalisation of elementary education.

The study was conducted on 115 students of standard IV, twenty from rural schools, thirty five from urban schools and sixty from the nonformal education centres. An environmental questionnaire by Rajput and associates was administered on the sample. The performance of students of the three groups was compared. Differences were tested for significance by t-test. First and the last ten ranking questions for each of the groups were identified and compared.

It was found: (i) The difference between FR and FU on environmental awareness was significant and in favour of FR.

(ii) Differences between NFR and FU was also significant on environmental awareness and in favour of NFR.

(iii) The differences between NFR and FR on environmental awareness was not significant.

(iv) The common aspects in the first ten were source of getting cotton(FU/FR/NFR), edible portion of tomato plant(FU/FR/NFR), animal for watching the house (FU/FR/NFR), effect of weather on the growth

of plants(FU/FR/NFR), direction of sunrise (FR/NFR), source of getting wool(FR/NFR).

(v) Some common aspects in the last ten ranked items were ways of preventing rusting of objects(FU/FR/NFR), the way of finding the direction of the wind (FU/FR/NFR), the way of finding the direction of the wind (FU/FR/NFR), idea of evaporation of water (FU/FR/NFR), relationship between rocks and stones (FU/FR), reasons for night being dark(FU/FR), the reasons for shadow not being formed in the dark (FU/FR), the reasons for giving boiled water to patients(FU/NFR), relationship between rocks and soil(FR/NFR), to find out time in a watch (FR/NFR), and the role of bone skeleton to give a definite shape to the body(NFR/FR)

GROUP -II

VOLUME -I  
ABSTRACT -54

BASIC EDUCATION AND ITS WORKING IN THE STATE OF BOMLAY (A HISTORICAL REVIEW) H.D. EDU., POM. U., 1958.

(H.P. PATEL)

The objective was to have a critical review of Basic Education in the light of criticism and substantial changes undergone from time to time.

The survey has been based mainly on the various reports on Basic Education as well as on the periodical departmental reports.

Since its conception by Gandhi in 1937, the Basic Education scheme has been discussed very thoroughly from various angles by different types of people including educationists, political workers, social leaders and field workers in the sphere of education. Experiments have also been conducted in the light of which and socio-economic and political conditions, the original scheme was modified to suit the needs and situations in the country. Some have stuck to what Gandhi had thought of some twenty years (in 1930). Others emphasised the dynamic nature of education. For a sentimentalist any word against Basic Education was a word against Gandhi. Some educationists have gone to the extreme of calling Basic Education "a retreat to barbarism". Basic Education was, however, modified time and again. The general pattern of education in India under foreign rule, though wasteful and unsuitable to Indian soil, continued even after independence.

The development of the concept of Basic Education, from the first Wardha Conference in 1937 and Gandhi's article in the 'Harijan' explaining his view has been discussed. He conceived education to be oriented to production from the moment his training was begun. According to Gandhi, every school could be made self supporting. This statement set educationists thinking. His definition of education was accepted in its full spirit but the self supporting aspect was criticised. The Wardha Conference in 1937, accepted four fundamental principles.

- (a) free and compulsory education for seven years on a nationwide scale,
- (b) medium of instruction to be the mother tongue.
- (c) education to centre round a craft,
- (d) gradually production should be able to cover the remuneration of the teachers. The ideal was to make

the Basic School student cont percent self sufficient in due course . The extent to which the Wardha scheme could foster the cottage industries in this country in this machine age, when all nations of the world were moving towards industrialisation and to what extent Basic education could help a child in this age scientific investigation was a point of criticism. A Basic education is never against scientific inventions and their use in uplifting the nation. The Basic Schools were required to serve as training centres for cottage industries, and so they had wide scope in villages. The craft selected could differ from region to region in keeping with the local traditions and possibilities and hence there could be no rigidity in the curriculum of Basic Schools. These schools had to develop those qualities of character and the habit of work, which would make a person successful in an industrial society. Basic education implied child-centred education through the mother tongue, creating homely atmosphere and orderly living in the school, by keeping in touch with the other groups of the society. The Basic School should be a little world, imparting knowledge and it should prepare the child as an active and ideal citizen of the world. The Basic scheme was introduced in Bombay State as an experimental measure in 1937 in four areas in Maharashtra, Gujarat and Karnatak. Short term courses for teachers were introduced by way of experiment at Loni, Ahmedabad and Dharwar. Various difficulties like the provision of finance, supply of equipment, and raw materials were felt. The experiment was extended to other primary schools in class I to IV and then in 1946-47 upto class VII. The experiment, however, progressed under stress and strain. The courses were also modified from time to time. Proper implementation demanded training of teachers and so short term training courses were started and gradually teacher training colleges were opened in different parts of the country. The states of Bihar, Bombay and Uttar Pradesh tried to do something for the scheme. To make the scheme successful, its organisation, administration and supervision must be properly managed.



PRIMARY SCHOOL TEACHERS - A STUDY, THE CENTRE FOR REGIONAL  
DEVELOPMENT STUDIES, SURAT, 1969.

(Y.D. JAINIA)

The major findings are :

- (i) among the primary school teachers of Surat, the tribals (adivasis) constitute nearly 41.5 percent, while among the rest (i.e. non-adivasis) Kulis and scheduled castes or Harijans constitute the larger groups and not the so-called higher castes like Brahmins, Vania and such others;
- (ii) the female teachers constitute one-third the number of primary teachers of Surat district (1968-69);
- (iii) nearly ninety percent of primary school teachers come from poor classes;
- (iv) nearly three-fourths of the teachers have their annual income ranging between two to three thousand rupees, while twentythree percent of the other have less than two thousand rupees as their annual income.  
-ix sixtyeight percent of teachers are who neither engaged in a subsidiary occupation nor are inclined to take up one in order to supplement their income;
- (vi) nearly ninetytwo percent of primary school teachers are natives of rural areas, and among them also a large majority are natives of tribal areas, only twentythree percent of teachers are well exposed to urban environment;
- (vii) eightyfour percent of teachers have the background of agricultural occupations requiring no formal education but only formal training as against
- (viii) only fourteen percent of the teachers have higher education upto a specific level;
- (ix) nearly half of the teachers are found to be possessing just the required qualifications, i.e. P.S.C. or P.S.C.;

- (x) ninetyfour percent of teachers are trained;
- (xi) only fortysix percent have, straight way joined this profession;
- (xii) fiftyone percent of teachers consider their own occupation to be higher than their fathers'; thirty percent consider it just equal to their fathers' and only fifteen percent of the teachers feel that they have become downward mobile by accepting primary teacher's job;
- (xiii) twentyseven percent of teachers have the experience of teaching, only in the schools having all or majority of tribal students, while seventeen percent have taught only in the schools with all or majority of non-tribal students;
- (xiv) teachers, in general, have found it easier to establish cordial relations with the people of tribal areas than with those of non-tribal areas, irrespective of their being a member of the tribal or non-tribal society;
- (xv) against thirtyseven percent of teachers who have worked only with the team predominantly consisting of tribal teachers, only sixteen percent have shown preference to work with such a team, contrary to that nearly thirteen percent of teachers have worked with a predominantly non-tribal team, but as many as thirtythree percent of teachers prefer to work with such teams;
- (xvi) the proportion of teachers who do not observe the directive of staying in their headquarters is significant;
- (xvii) even if the teachers are given choice in the transfers, only twelve percent choose native villages, while nearly seventy percent like to be placed anywhere in the taluka of their origin.
- (xviii) seventyeight percent of teachers are satisfied with the existing rules for transfers;
- (ix) eighty percent of teachers welcome supervision;
- (xx) teachers, in general, have found the administrators both at taluka and district levels to be sympathetic in entertaining and dealing with their problems;

- (xxi) majority of the teachers are worldly in their orientation (sixty-nine percent), secular in their outlook (fifty-eight percent) activity-oriented (ninety-three percent) and with the belief in achievement criteria of status evaluation;
- (xxii) sixty-seven percent of teachers find all or most of the changes which occur in the daily life and society around them, to be good;
- (xxiii) principal aim of education according to sixty-three percent of teachers is to prepare good citizens; and
- (xxiv) sixty-seven percent of teachers want to educate their children in urban areas only, while another eleven percent want to educate their children partly in urban and partly in rural area only, which shows a definite trend of movement from rural to urban environment.



GROUP -II

VOLUME -I  
ABSTRACT -152

LANGUAGE DEVELOPMENT OF GUJARATI CHILDREN UPTO THE AGE OF TWELVE, PH.D. EDU. DOM. U., 1964.

(K.R. MEHTA)

The study intended to measure the language development of Gujarati children up to the age of twelve.

The sample consisted of 100 children selected from 16 places in Gujarat, Saurashtra and Bombay. Fifty children in each group were tested orally. The children's responses were recorded during three visits at the interval of seven days. The correlation coefficient between the two response recorders was 0.99. Mechanical nonmechanical toys, charts, models story books, maps drawings and paintings were used. By following the usual procedure of test construction, 17 tests were prepared for standards III to VIII and 14 for standards V to VIII for children between 8 to 12 years. Norms were also established. In order to test written vocabulary, children had to write for 30 minutes on a topic of their choice. Oral and written responses were analysed under various heads. Oral responses were classified into 13 and the written compositions into 10 categories. In order to test language development, 31 tests consisting of 1278 items were constructed. The reliability was calculated by test-retest as well as by the split-half method. The validity was calculated by computing the correlation between tests and teachers' ratings. It was 0.56. Percentiles, stanines, age norms, grade norms and sex norms were calculated.

Following were the important findings;

- (i) Analysis of the oral responses indicate that children develop language as they grow older;
- (ii) repetitions go on decreasing with age from birth to about eighth year and then remains steady;
- (iii) imitation increases till eighth year and then remains steady;
- (iv) recognition of colours increases with age;
- (v) children utter numbers before they can count things;
- (vi) children start asking questions at the age of  $1\frac{1}{2}$  years, and do so more till fourth year, but this tendency decreases after eighth year;

- (vii) vocabulary increases upto 4054 words from birth to eighth year;
- (viii) speaking of sentences begins to appear at the age of six months;
- (ix) the length of sentences also increases with age;
- (x) children construct simple, compound, complex sentences as they grow ;
- (xi) the analysis of compositions reveals that the mean length of sentences increases with age from 3.7 words to 9.8 words;
- (xii) the mean number of sentences increases with age;
- (xiii) the number of simple and compound sentences decreases with age while the number of complex sentences increases;
- (xiv) the vocabulary also increases with grade and age;
- (xv) the use of present tense increases with age while that of past tense decreases whereas the future tense is used only after the VI grade; and
- (xvi) nouns dominate all other parts of speech whereas verbs come second but their use decreases gradually, Pronouns and adjectives, however, continue to decrease with age and grade.

THE LANGUAGE DEVELOPMENT OF GUJARATI SPEAKING BOHRA GIRLS  
OF STANDARD IV OF A TYPICAL BOHRA GIRLS' SCHOOL, PH.D.  
EDU., BOH.U., 1961

(S.J. M. C. ...)

The study was undertaken -

- (i) To scrutinize and study pupils' compositions as well as various aspects of language development and teaching, namely, subject matter, vocabulary, grammar, philology, orthography, punctuations, abbreviations, length of composition, structure of the sentence, paragraph construction, and expression;
- (ii) to study the methods followed by teachers for teaching composition; and
- (iii) to help the language teachers to improve the language skills of Bohra girls.

Composition exercises written by 70 girls of standard IV of a Bohra school in Bombay were utilized to study the language development. Information was also collected from previous related studies as well as by a questionnaire which was sent to forty primary teachers in Bohra schools and four non-Bohra Gujarati schools. Composition exercises of seventy girls (six from each) of standard V were examined to trace further development. The 1190 composition exercises were classified and grouped according to the description, events, letters and stories, and then according to the subject matter. The root words used by children of standard IV were arranged alphabetically and classified according to grammar and philology. A similar list was prepared for standard V and later on a combined list of 1000 words was prepared for standards IV and V. The methods followed by different teachers for teaching composition were studied by interviewing several teachers.

The findings revealed that

- (i) the teachers are not aware of language development in children;
- (ii) 3,530 different words are used in all compositions in standard IV and 2,209 in standard V;
- (iii) the number of running words is 1,47,414 in IV standard, whereas, it is 51,596 in standard V; and

- (iv) the orthographical study of compositions reveal the following type of mistakes - substitution of one letter for another, omission, incorrect use of numbers, inaccurate spelling of words and incorrect sentences. Statistical information regarding each type of error, average number of words in each paragraph and the average number of paragraphs in each exercise is also presented in the study.



GROUP -II

VOLUME -I  
ABSTRACT -213

EFFECT OF SUPPLEMENTARY DIET ON THE PHYSIQUE OF SCHOOL CHILDREN, PH.D. EDU., PUNJ U., 1960.

(K.V. PANSE)

The present work was an attempt to solve the problem of malnutrition among school children and to find out the effect of four supplementary diets, viz., Neera, Palm-gur, Skimmed Milk and Plantain on the physical development of children.

The sample consisted of pupils of age group 6 to 11, fifty pupils in each of the experimental and control groups. Collection of data was organised at different centres in the State of Bombay, viz., Dahanu, Kase, Talwade and Bardi of Narpad centres. The four supplementary diets were provided to school children for a period of 6 months and the effect on weight and other abilities was studied. Aspects such as weight, agility, speed, arm strength and endurance were tested by using different performance tests before and after the treatment of supplementary diet. Analysis of variance, t test and correlation techniques were used for analysis of data.

The results of the study revealed that-

- (i) it was possible to solve the problem of malnutrition fairly satisfactorily;
- (ii) effect of neera as a supplementary diet was good for weight, speed and agility;
- (iii) plantain had no effect on weight but had better effect on agility than skimmed milk;
- (iv) there was improvement in attendance in schools due to supplementary diet;
- (v) there was improvement in skin complexion of experimental group; and
- (vi) such cheap and locally available food stuff might be introduced as supplementary diet in schools.



GROUP -II

VOLUME -I  
ABSTRACT -230

THE CONSTRUCTION AND STANDARDISATION OF A GROUP TEST OF  
INTELLIGENCE IN ENGLISH FOR THE AGE-GROUP 9 TO 13 YEARS.  
PH.D. EDU., PCM, U. 1969

(P. AHUJA)

The study aimed at development of standardised group test of intelligence in English which would have a predictive value for scholastic attitude too.

Out of a pool of 400 simple and unambiguous items, only 226 items were selected for the pre-tryout. The pre-tryout was done on twelve students of an English medium secondary school. The second preliminary administration was done on 370 students of grades V to VIII, drawn from three carefully selected English medium schools of Greater Bombay. Item validity was found out using six different methods.

After item analysis 100 items were retained for the final form. The number of items in each subtest are: analogies-10, classification-10, same-opposite-26, disarranged sentences-10, series-10, and best answers 16. Selected items in each subtest were arranged in ascending order of difficulty. The time limit was scheduled in such a way that there was little emphasis on speed. The final order of the battery was -

- (i) scrambled words (practice test),
- (ii) Analogies,
- (iii) classification,
- (iv) disarranged sentences,
- (v) same-opposite,
- (vi) series and
- (vii) best answers.

A third tryout was done on students of classes V through VIII of an English medium school. For the final administration a sample of 10,373 students was randomly selected from fiftythree schools of forty different postal zones under Greater Bombay. Age norms and grade norms were worked out separately for boys and girls. Along with the deviation intelligence quotients, percentile ranks, T scores, sigma scores, standard scores and stenine scores were also



GROUP -I

VOLUME -I  
ABSTRACT -200

INDIAN ADAPTATION OF WECHSLER'S INTELLIGENCE SCALE  
FOR CHILDREN, PH.D. ELU., NAG. U., 1964.

(A.J. MALLIN)

The objective was to prepare an Indian adaptation of Wechsler's Intelligence Scale for Children.

The contents of each verbal subtest were adapted after the pretest and item analysis. The performance test did not need any content adaptations but needed new difficulty ranking which was done by administering the test on a small group. The verbal tests were administered principally in Nagpur, Bombay, Simla and Mangalore involving over 1000 children. The vocabulary test received special attention because it was proposed to make it unifactorial in the lower age levels and to use it only as an alternative in the upper age levels. The sample chosen for the standardisation of the test consisted of 656 children of age group ranging from six to fifteen years from urban schools. As compared to the original sample of the Wechsler's Intelligence Scale for Children, this sample was about twentyfive percent.

The statistical norms were established. In the adapted version, the usual scaled score technique was substituted by percentile IQ. The reliability coefficients of the Wechsler's Intelligence Scale for Children as found out by test-retest method were .92 for verbal scale, .93 for performance scale and .91 for the full scale. The test was validated against ratings by teachers (.61) Draw-a-man Test (.71) and the California Test of Mental Maturity (.63). Other observations were that the performance of the boys was better on intelligence test than of the girls, whereas the girls' performance was better on the performance scale than that of the boys.



Group-II

Volume-I  
Page-315

# EXPERIMENTS IN STANDARD I TEACHING - A STUDY OF THE EFFECT OF CHILD-CENTERED TEACHING PRACTICES AND CORRELATED PLAY ACTIVITIES ON THE QUALITY OF ATTAINMENT, ATTENDANCE AND DISCIPLINE IN STANDARD I

Educational surveys in different localities in Greater Bombay have consistently shown that the incidence of dropping out from school is highest in standard I, and that on an average the daily attendance in the class is the lowest compared to that in the other classes. Consequent wastage is staggering. For this reason it was decided to study in minute detail how to hold the interest and attention of the six year olds and how to improve the quality of education in standard I.

Experiments in teaching methods based on purposeful practical work and active participation of children were conducted in two divisions of standard I in the Dongri Lower Primary School for a period of two years. Day to day teaching was planned out and teaching aids were used for group activities. Play activities related to academic subject matter formed a special feature of the programme. The total sample consisted of ninetyone children. Four main aspects were observed, viz., (i) educational attainment; (ii) regular attendance; (iii) general tone and discipline; and (iv) cooperation with the group. A comparative study of the effect of psychological teaching methods and planned programme of work on the educational attainment - both quantitative and qualitative, discipline, reading habits and regular attendance of children in the experimental classes and a more or less equivalent group of children in two other divisions of standard I of the same school working under ordinary condition was made. Sample for the final experiment consisted of 128 students.

The findings of the study were: (i) the controlled group was found to be not only superior in educational attainment to the uncontrolled group but also to the children in the experimental group. As a result of this, the average attendance went up considerably, and very few dropouts were recorded; (ii) out of the 128 children who

were on roll in three divisions in standard I under experiment, 116 children who attended school regularly were found to have completed the course satisfactorily; (iii) it was found that 38, i.e., about 30 per cent, could be granted a double promotion due to the fact of having not only successfully completed the standard I course, but also covered the course of standard II and this was ascertained by the inspecting officer after having carefully inspected the progress of these children; (iv) even in a backward area like Dongri, children who were more or less regular were able to complete the academic course without any undue strain when the instruction was well planned, the environment was enjoyable, and sufficient play activities were introduced; (v) the present curriculum is not at all heavy and children with average ability can easily complete the course satisfactorily without doing any work at home; (vi) in this particular school, it was noticed during the past ten years that about 20 to 30 per cent of the children failed to return to school after the recess hours, but it was noticed that hardly any child remained away after recess during the two years of the experiment; (vii) the average attendance went upto 90 per cent; (viii) the tone and discipline in the experimental group was appreciably superior and the children in the experimental group were found to be aware of their social responsibilities; and (ix) the experiment may be said to have instilled in these children a feeling of consideration for the others, which is the basis of good citizenship, from very early age.



GROUP -II

VOLUME -I  
ABSTRACT -316

BOMBAY MUNICIPAL CORPORATION, UNGRADED UNIT EXPERIMENT,  
PRIMARY EDUCATION DEPARTMENT, 1969.

The experiment was prompted by the need of convenient yet scientific and appropriate method of dealing effectively with failures and underachievers in different school subjects. Since the lag in the educational achievement of children who fail is generally not more than six months, instead of keeping them back for the repetition of the same class, they were to be streamed for teaching in groups, in which they were required to complete the lag in their standards. The purpose of the study was thus defined to reduce incidence of stagnation and raise the standard of achievement in municipal schools.

In standard I, percentage of children who passed, who were promoted or who made up the lag was found to be 75.21 and 14.98 percent was asked to repeat the standard. About 9.81 percent students did not appear for the examination. In standard II these percentages were 75.53, 12.04 and 3.53, respectively. In standard III the percentages were 82.85, 12.70 and 4.45 respectively. In standard IV these percentages were 84.29, 12.40 and 3.31, respectively.



BOMLAY MUNICIPAL CORPORATION, LANGUAGE LEVELMENT PROJECT, STANDARDS III AND IV, PRIMARY EDUCATION DEPARTMENT, 1970.

The objective of this investigation was to improve and develop spoken and written language and establish in children firm habits of language communication. As many as 432 and 564 children from standards III and IV, respectively, were placed in the experimental group and 468 and 427 children in the control group. In both standards, the experimental group of children were given carefully planned teaching programme. Special attention was given to the sentence formation, writing, reading aloud in the classroom and library reading. Children were tested periodically to find the level of improvement. Children in the control group were taught in the usual way.

The evaluation conducted at the end of the experiment showed that 57.79 and 25.03 percent of children of standard III and IV, respectively, obtained marks which were above 40 percent as compared to 23.22 and 23.26 percent obtained by the control group. Moreover, an opinion survey of teachers and headmasters of the experimental school revealed that children, particularly younger ones showed marked improvement in speech, conversation, writing and - answering questions in the classroom.



Group-II

Volume-I  
Abstract-338

TEACHING BEGINNERS TO READ KANNAD -  
AN EXPERIMENTAL STUDY

(Author - Javli, V.K., Ph.D.Edu., Bom. U., 1949)

The objectives were:

- (i) to modify and adapt the intrinsic method to the teaching of Kannada to pupils of the first grade on the lines of A.I. Gates's work and
- (ii) to have an experimental investigation of the diagnostic and remedial phases of the reading problem by ascertaining the reading difficulties.

Two groups were formed in each of the two infants' classes chosen for experiment after administering the following tests:

- (i) Kamat's Intelligence Test;
- (ii) selection of figures;
- (iii) selection of the same and different figures;
- (iv) selection of the same and different letters and words; and
- (v) selection of words, and phrases and 'blending'.

Reading readiness of the pupils was also tested. The two classes were taught by different teachers and one group in each class (group A and C) was taught by the phonic method and the other groups (groups B and D) by the intrinsic method, first in 1945-46 and again in 1946-47. Seven groups from five different classes including the four groups from the two classes taken for the experiment previously, were taught in the second experiment. One of the classes was standard II and the other was standard III. Group A, in the second experiment, was taught by the 'Leela Method', (intrinsic method) and groups B, C, D and E by phonic method. The investigator prepared a cyclostyled book of 75 pages called 'Shankar and Leela' for the purpose of the study. The number of words introduced in it was only 249. Proper nouns were excluded. The vocabulary

burden was 8.2. The length of a sentence was restricted to one line. The following tests were administered to all the groups considered for the experiment: (a) letter recognition for letters - seen, spoken, pronounced (.) word recognition for words - seen, spoken, pronounced and words to coordinate with pictures; (c) silent reading test - coordinating sentences with their respective pictures, following directions, comprehending paragraphs; and (d) oral reading test - reading a short piece.

It was found that the aggregate scores of Group A (with intrinsic method) was 362.5 for the tests a,b,c, while the highest score from the other groups was 357.2. In the test d, the intrinsic method class made 108 mistakes (which is the minimum), the other classes made 111 mistakes. The investigation has also described six cases of remedial instruction regarding virtual errors in letter recognition, the auditory defects reflected through mis-pronunciation, errors in word recognition, word pronunciation and word making. The reasons for these have also been enumerated.

GROUP -II

VOLUME -I  
ABSTRACT -354

TEACHING MARATHI AS A REGIONAL LANGUAGE TO NON MARATHI -  
SPEAKING PUPILS STUDYING IN STANDARD III IN THE ANGLO-  
INDIAN AND THE ENGLISH-TEACHING SCHOOLS IN THE CITY OF  
BOMBAY AND ITS NEIGHBORHOOD, A CRITICAL STUDY OF THE  
PRESENT PLAN, THE COURSE, AND THE BOOKS PRESCRIBED,  
PH.D. EDU., BOM. U., 1964.

(K.A. PATANKAR)

The main aim of the present study was to develop and evaluate improved methods of teaching and reading Marathi for non-Marathi speaking pupils and to construct a new material for the same.

A critical study of the existing textbooks in Marathi had certain drawbacks demanding immediate attention. On the basis of this study new material was prepared with suitable vocabulary. Special attention was paid to the structure of the sentence. A novel feature of the present arrangement was the provision of the work-book in preprimary class which has taken care of all the basic pedagogic principles, at regular intervals provisions were made in the work-books for tests in letter recognition, vocabulary, word comprehension, sentence comprehension, recognition of structure of these sentences, knowledge, etc. While giving lesson with the newly developed textbooks and workbooks teachers used improvised teaching aids like wall charts, word and sentence slips, flash cards, and supplementary books.





A STUDY OF TEACHING OF SCIENCE IN RURAL PRIMARY  
SCHOOLS - STANDARDS I TO VII, PH.D. Edu., Poona U., 1967.

( Author - PATOLE, N.K.)

The study was undertaken to explore the existing weaknesses of teaching science in primary schools and devise methods for improvement in the existing situation. It is delimited to rural areas mainly. The following objectives were kept in view: (i) to study the existing facilities available for teaching of science in rural primary schools; (ii) to frame general science syllabus for standards I to VII; (iii) to study the effectiveness of activity based method and traditional method of teaching the subject; (iv) to suggest measures which can help improve the teaching of science in rural primary schools. The area selected for the study was the entire Kolhapur district.

The whole work was divided into three major parts. The first part was devoted to achieve the first objective. A sample of 100 schools was taken and a questionnaire was given to the schools. The school questionnaire covered all aspects of teaching of science such as syllabus, teachers, pupils' work, laboratory equipment, etc. A teacher questionnaire was given to about 550 teachers from the above schools and also to about 550 trainees in selected primary training colleges to find out their difficulties in implementing the syllabus, methods they follow, etc., and spot observation study was made in fiftyone schools. In the second part an effort was made to evolve general science syllabus for classes I to VII based on the following criteria of pupils' interest and needs of the society. An interest study of 2000 pupils studying in class VII was taken up and 16808 items were collected from them. To know the needs of the society, 200 rural family heads were interviewed. These two investigations were used for framing the general science syllabus for classes I to VII. In addition to this, a comparative study of existing science syllabi in different states of Indian was done. The new syllabus followed a concentric approach in the following broad areas, viz., (i) human beings, (ii) plant life, (iii) animal life, (iv) weather, (v) machines. A list of scientific equipment required for the course was also given.

The method aspect of teaching science was studied in the third part. The controlled group technique was used. A pretest was given to both the groups. It was found that there was no significant difference between the groups.

Mothly plans of the syllabus to be covered were given to teachers. Teachers of experimental groups were given a plan of activities to be performed. An effort was administered after four months. The experimental group performed well and the difference in the performances of the two groups was significant.

The following are some of the important findings of the study: (i) about seventyfour percent teachers and sixtyone percent trainees are of the opinion that science should be a separate subject from standard I and should not be integrated with social studies in the first four grades; (ii) sixty percent of the teachers have passed their P.S.C. examination, thirtynine percent have passed the S.S.C. examination and the remaining have taken higher education; (iii) the average number of pupils per teacher in standard I is 73.40 which gradually decreases in upper standards and in standard VII it comes to 27.27; (iv) only ten schools possess a complete set of equipment for the practical demonstration of experiments; (v) none of the schools has a separate science room; (vi) none of the schools subscribes to any periodical devoted to scientific knowledge and information; (vii) there is no significant difference in the boys and girls as regards interest in science; (viii) the number of questions asked by pupils decreases as they advance in age; (ix) the topics in which pupils seem most interested are our body, health and hygiene, mechanics, diseases, heat, senses, air, water and food for plants; (x) the topics in which pupils showed less interest are pests on plants, season, insects, fishes, other animals, reproduction of animals, and reproduction of human beings; and (xi) the activity based method was found superior to the traditional one.

Group-II

Volume-I  
Abstract-367

COMPOSITION WRITING IN MARATHI IN PRIMARY  
SCHOOLS OF GREATER BOMBAY

(Author - Sawant, T.T., Ph.D.Edu., Bom. U., 1970)

The purpose of the investigation was to study composition teaching and its different aspects examine childrens' writing and explore ways to improve the teaching of the subject.

An intensive analysis was made of 3,874 compositions written by 2,948 children of twentyseven Municipal Marathi schools. Information regarding the assessment of composition was collected from fortyseven other schools. The necessary details were collected through (i) questionnaire sent to teachers and students; (ii) composition written by children throughout the year under the supervision of the class teacher; (iii) composition written by children on the subject of their own choice; (iv) an experiment in handwriting; (v) an experiment in orthography; (vi) observation of teachers' work; (vii) interviews with the teachers; and (viii) using the valuable experience of the researcher as a primary school teacher. A composition scale as a tool for assessment was prepared in consultation with 700 teachers of fortyseven schools. In preparing the composition scale, the following points were considered:

- (i) expressing one's own thoughts and ideas;
- (ii) expressing one's own feeling;
- (iii) writing legibly;
- (iv) following rules of orthography;
- (v) writing as many lines as required.

The scale was prepared by getting a piece of composition assessed by 100 teachers once by their own methods and second time in terms of the above five aspects and by having discussions on the two types of assessment.

The following were the observations made: (i) purpose, subject and style of composition change with time and teachers are highly influenced in teaching composition by the essayists in respect of subject matter and style of writing; (ii) the subject of composition related to science is responded to scantily due to the dearth of first-hand knowledge; (iii) the pupils' choice of topics vary with age; (iv) regarding the feelings expressed in the composition, children of standards I to III do not express, while those of standards IV to VII express in a very scattered and unsystematic manner; and (v) if asked to express their feelings in their composition, children of five to seven years express them through their liking and disliking, but the expressions of children of eight to twelve years have some depth.

TO PREPARE PROGRAMMED LEARNING MATERIAL AND TO STUDY  
IN WHAT DIFFERENT WAYS IT CAN BE USED, PH.D. EDU.,  
POONA U., 1969.

( Author - KULKARNI, P.V. )

The objectives of the study were : (i) to prepare programmed learning material, the topics being (a) 'Introduction to Algebra' and (b) 'Simple Equations'; (ii) to evaluate this material in terms of products of instruction, time taken to go through the programme, sequence progression, error rate, etc.; (iii) to investigate the effects of student variables and method variables on maximising the performance of students, if these topics are introduced in lower grades where they are not conventionally taught.

The programmed learning material containing new curriculum in algebra was developed through determination of need and purpose and general training requirements, analysis of entering and terminal behaviour, development of criterion and learning set tests, behavioural analysis, organisation and sequencing of topics, determination of format and strategies, writing, editing and revising frames in the programme till it reached the desired level of teaching effectiveness. In all, 431 students were included in the study. Two divisions each of grades V, VI, VII and VIII were selected from a centrally located high school in Poona. In each grade, pupils from these two divisions were assigned at random to each treatment. Three experimental treatments were set up for this study. After pretesting, all students were asked to go through and complete the programmed learning material according to a fixed time schedule. After this, an immediate post-test was given. Then three treatment groups were set up for study. Treatment group I was asked to revise by going through the same programmed learning material. Treatment group II utilised summary review pamphlets, which were not programmed, for revision. Treatment group III did not utilise any sort of review material. There was no revision of instruction. After this, all students were given a post-test, which was a parallel form of the immediate post-test. After six weeks, a post-test was again administered to study retention.

The following were the major findings of the study:

- (i) On an immediate post-test, the mean score of students having predefined entering behaviours was significantly

higher than the mean score of students not having the necessary entering behaviour, (ii) School subjects supposed to be measuring better reading habits (Marathi), aptitude to study similar subjects (Mathematics) and better study habits in general (Grand Total) correlated significantly with immediate post-test scores, (iii) There was no correlation between the time taken to go through this programme and post-instructional performance, (iv) Students using programmed learning material for revision were significantly better than students using summary review pamphlets. The control group lagged significantly behind the above two groups. This was true with students having entering behaviour. For students not having entering behaviour also, programmed material was more useful than unprogrammed summary review material, (v) The effects of different revision treatments did not seem to have any bearing on retention. (vi) After completing one revision by using programmed learning material, the students having entering behaviour, performed significantly better than what they had done after going through the programme for the first time. (vii) The retention scores of students having entering behaviour were significantly less than those after the first revision by using programmed material. (viii) No significant difference in means was found between immediate post-test scores and retention scores for students having entering behaviour. (ix) Students having entering behaviour did not improve significantly after one revision by using summary review pamphlets. In these groups, means of immediate post-test scores and retention scores also did not differ significantly. (x) Students not having knowledge of subject content did significantly better after completing one revision only if they used programmed material for revision. Though the scores on delayed post-test were significantly less than those at the end of the first revision, these did not differ significantly from immediate post-test scores. (xi) Revision by using unprogrammed summary review materials or no revision, whatever was done, the students having no entering behaviour showed no significant difference in achievement.

GROUP -II

VOLUME-I  
ABSTRACT -426

A STUDY OF THE EDUCATIONALLY BACKWARD CHILDREN IN THE AGE-GROUP 8-12 YEARS NAGPUR SCHOOLS, UNIVERSITY TRAINING COLLEGE, NAG., U., 1969 (NCERT FINANCED)

(G.S. PURANIK AND S. KUNDLEY)

The present study was undertaken to study educationally backward pupils with regard to their intelligence, vocabulary equipment, arithmetic ability and emotional problems.

A sample of 24000 students in the age group from eight to twelve years, from classes III, IV, V and VI was drawn from Nagpur. The sample included students all socio-economic groups. Annual marks and teachers' ratings were used to identify 100 backward and 100 bright students and to have a comparative study on variables stated above. Objectively developed and standardised tests were administered to these two groups to collect required data, which were analysed to study mean performances of the groups. Data were collected with the help of examination records for achievement, rating scale, the Pathak Intelligence Test, vocabulary test, arithmetic test and a problem inventory.

Findings revealed that educationally backward and bright children differed significantly on intelligence, vocabulary, and arithmetic ability, bright ones scoring high on each test. These factors seemed responsible for fifty percent of the backwardness among the children. The backward children had adjustment problems related to studies, teachers and examinations. They suffered from inferiority complex, health problems, brooding and lack of security. They were, however, adjusted with their families. They hailed from very low socio-economic strata. Of the factors studied, poor socio-economic conditions seemed to be more responsible in causing backwardness among the children.





GROUP -II

VOLUME -I  
ABSTRACT -460.

FACTOR ANALYSIS OF ARITHMETICAL ABILITY, PH.D. EDU., BOM, -  
U., 1943.

(D.V. CHICKERMANE)

The objective of this study was to determine the number and nature of mental factors involved in arithmetical ability.

A battery of tests was constructed which included-

- (1) addition,
- (2) subtraction,
- (3) multiplication,
- (4) division,
- (5) number series,
- (6) error detection,
- (7) finding the missing digits,
- (8) judgement,
- (9) problems,
- (10) common words,
- (11) technical terms,
- (12) measures,
- (13) computation,
- (14) problems (visual),
- (15) table reading,
- (16) space diagrams,
- (17) table comprehension,
- (18) analogies,
- (19) true-false,
- (20) logical selection, and
- (21) substitution. These tests were administered to two

homogeneous groups of students. The first group consisted of 320 student-teachers from two training colleges at Belgaum and Dharwar. The second group consisted of 210 students of classes VI and VII (Pre-Matric and Matric) from four high schools in Belgaum. Tests 1 to 9 were common to both the groups. Tests 10 to 17 were administered only to the first group. Tests 18 to 21 were administered only to the second group. Correlations were computed using Pearson's product-moment formula. A correlation matrix of 136 coefficients for the first group and of seventy-eight for the second group were analysed following the Thurstone's centroid method. After extracting three factors, the residuals seemed to be negligible. The distributions of the residuals were found to approach normal distribution. The centroid factors were then rotated to make them meaningful.

The obtained results showed that the arithmetical ability consisted of -

- (i) Reasoning Factor (Probably 'G'),
- (ii) the Number Factor 'N', which helped in computation, and
- (iii) the Verbal Factor 'V', which helped in problem solving and comprehension.

GROUP -II

VOLUME -I  
ABSTRACT -477

FACTOR ANALYSIS OF SOME GEOMETRY TESTS, PH.D. EDU., BCM,  
U., 1954.

(V.R. GOKHALE)

The study examined whether any special ability existed which might be called mathematical ability, and if so, what were its nature, scope and limitations.

Tests in geometry were constructed in such a way that each test represented a mental factor. The construction was on the general belief that the ability to study geometry involved general intelligence and deductive reasoning (Thurstone's factor) and to some extent inductive reasoning, number, space, visualisation, rote memory and verbal factors. Fourteen tests were included in the study. These were -

- (i) drawing conclusions from the given data,
- (ii) analysing constructions from given figures,
- (iii) computation of certain angles in a figure when the values of some of those in the figure have been given,
- (iv) completing proofs by filling in the blanks,
- (v) drawing the diagram from the given data,
- (vi) truth and falsity of geometric propositions or of given data,
- (vii) arithmetical reasoning through problems,
- (viii) judging correctness of conclusions,
- (ix) selection responses.
- (x) locus problems,
- (xi) proofs,
- (xii) arithmetical operations,
- (xiii) figures with shading of parts and
- (xiv) block counting in isometric drawings. The last three tests and also test
- (xv) above were used as reference variables for

for identifying factors. The reliability was calculated by split-half method. In most of the tests, the coefficients of reliability were around .70 but for 'diagrams' it was .36 and for 'arithmetic' .95. The concurrent validity coefficient against marks in geometry for S.S.C. examination was found. Tests were administered to 230 students of class VII from four schools in Poona. The statistical analysis involved the Thurstone's centroid factor analysis. Three centroid rotated factors were derived. These factors were named as 'G', 'n' and 's' covering 43.3 percent, 5.2 percent and 2.7 percent of the total variance respectively. These were three corresponding clusters of tests -

- (1) for factor 'G' : tests (i) to (vi), (x) and (xi),  
(-)
- (2) for 'n' : tests (vii), (ix) and (xii): and
- (3) for 's' tests (viii), (xiii) and (xiv). The nature of tests helped to name these factors as General (G), Number (n) and Spatial (s). These factors were found to have high degree of stability. Three factor scores were estimated and correlated and ~~xxxx~~ with S.S.C. examination marks in geometry. The correlation coefficients were high. The factors of 'G', 'n' and 's' were found to have relationship. Factor estimates of Bombay sample and Poona sample were comparable in terms of factors 'G', 'n' and 's'.

GROUP -II

VOLUME -I  
ABSTRACT -484

CONSTRUCTION AND STANDARDISATION OF AN ACHIEVEMENT TEST IN HINDI, JANATA COLLEGE OF EDUCATION, CHANDA, 1964.(NCERT FINANCED)

(S.K. JHA, J.D. ALTEKAR, B.K. JHA,  
R.V. GAJARE AND INDAPURKAR C.D.)

This test was devised to measure the achievement of pupils in the major aspects of Hindi language learning. It was designed specially for schools of rural areas of Vidarbha.

The specific objectives were first formulated. On the basis of general objectives and objectives of the syllabi, the syllabi prescribed for classes V, VI, VII and VIII by the Vidarbha Board of Secondary Education, Nagpur, were studied and analysed in the content areas. Some standardised tests both Indian and foreign, were critically studied before the items were constructed. Items mostly of multiple-choice type were prepared under different subjects, viz vocabulary, comprehension, recognition of tenses, spellings, sentence structure, Hindi usages and construction shift. Tryout was carried out by administering the test to one hundred pupils from local schools in Chanda city. The modified test was administered to over 400 pupils from the rural areas of Chanda district only. Item analysis was carried out and finally 400 items were selected for inclusion in the preliminary test. The test was administered in four parallel forms to 7000 pupils randomly selected from five schools of each district of Vidarbha. Item analysis was again carried out. On the basis of discriminating index and difficulty level, 400 items tried in the preliminary tests were included in the final form of the test. Age norms, grade norms, percentile norms, standard scores, T-scores, C-scores and other derived scores were worked out. Reliability of the test was calculated by using K-R formula and the coefficient of reliability was found to be .97. The multiple R, the coefficient of determination, the coefficient of alienation and index of forecasting efficiency were also computed. Content, criterion and intrinsic validity were found out for the test and the co-efficients of validity were found to vary from .45 to .98.



DIAGNOSTIC TESTS IN ARITHMETIC OF GUJARATI SPEAKING CHILDREN  
OF STANDARDS IV TO VII, PH.D. EDU., BOM. U. 1966.

(G.D. MEHTA)

The aim of this study was to construct diagnostic tests in arithmetic for standards IV to VII.

Syllabus in arithmetic and question papers set at the annual examinations of ten different schools for the selected classes formed the basis for construction of pre-pilot tests. These tests had six subjects one each for addition, subtraction, multiplication, division and two for mental problems. On the basis of the pre-pilot test results, the pilot test was developed. After deleting items which had high item difficulty, the reliability of each subtest was calculated using K-R formula. Tests were found to be reliable. Tests were finally administered on a total sample of 4141 students from different types of schools. The types of errors committed in each of the four fundamental processes as well as in mental problems were noted, classified and their frequency calculated.

The findings of the study were -

- (i) there was no significant difference between the results of boys and girls;
- (ii) very few students seemed to have mastered the fundamental processes; and
- (iii) even those students who had mastered the four fundamental processes failed to apply the knowledge in solving mental problems. A remedial work was done on a small group of students having the same type of difficulty.





GROUP -II

VOLUME -I  
ABSTRACT -514

CONSTRUCTION AND STANDARDISATION OF ACHIEVEMENT TESTS IN ARITHMETIC FOR STANDARDS V, VI AND VII FOR CHILDREN STUDYING THROUGH MARATHI AS THE MEDIUM OF INSTRUCTION IN GREATER BOMBAY, PH.D. EDU., BOM.U., 1968.

(V.Y. PENDHARKAR)

In this study achievement tests in arithmetic were proposed to be constructed and standardised for standards V, VI and VII of Marathi medium schools in Greater Bombay.

The syllabus and authorities in the field were consulted, and the relative weightage to various topics was assigned on the basis of

- (i) allotment of periods to each topic by sixteen experienced teachers,
- (ii) the weightage that these teachers would have given to each topic in a question paper and
- (iii) analysis of textbooks. Based on the above factors, draft items were framed for the tests. The pre-pilot testing was done on 100 pupils of each standard from three schools. The pilot testing was done on a sample of 370 pupils of each standard drawn from thirteen schools in Greater Bombay selected at random. After item analysis, the final form of tests consisted of fifty items for standard V, fiftyeight for standard VI, and fiftyeight for standard VII. Final tests were administered on 2248 pupils of standard V, 2119 of standard VI and 1708 of standard VII drawn from sixty five secondary schools of Greater Bombay selected at random. The reliability and validity of tests, percentile norms, standard scores, and T scores were worked out.

It was found that the achievement of girls of standard V, VI and VII in arithmetic from non-municipal schools was superior to that of the girls, of the respective standards from municipal schools. The scores on the tests were normally distributed.



GROUP -II

VOLUME -I  
ABSTRACT -528

CONSTRUCTION AND STANDARDISATION OF ACHIEVEMENT TESTS IN GENERAL SCIENCE FOR STANDARDS V, VI, AND VII FOR CHILDREN STUDYING THROUGH GUJARATI AS THE MEDIUM OF INSTRUCTION IN GREATER BOMBAY. PH.D. EDU., DOM. U., 1967.

(U.SHETH)

The purposes were -

- (i) to provide tests to measure the achievement of pupils of grades V, VI and VII, in general science through objective type of tests and
- (ii) to determine the strength and weakness of pupils from the analysis of the scores.

The preliminary drafts of the tests were prepared giving weightage to objectives and topics. The drafts consisted of 238 items for grade V, 267 items for grade VI and 327 items for grade VII. Seven different subtests for all the three grades were prepared. Each subtest of every grade was separately tried out on a sample of 100 pupils. The data were analysed and modifications were incorporated. Pilot testing was done on 400 pupils of each grade selected randomly. After item analysis, the final tests contained ninetyfour items for grade V, 104 items for grade VI, and 109 items for grade VII. The final tests were administered to a sample of 1,235 pupils of grade V, 1,161 pupils of grade VI and 1,564 pupils of grade VII, selected randomly from twentyone schools of Bombay city and suburbs. Percentile norms, stanine scores standard scores and T-scores were computed. Reliability of the tests was calculated for each grade by split-half method, Kulon's formula and by the method of rational equivalence. The validity of the tests was established against teacher's ratings and school annual examination marks in general science.

It was found that -

- (i) the reliability coefficients of the tests as calculated by the three methods varied from .888 to .985 for grade V, from .894 to .991 for grade VI and from .932 to .985 for grade VII;
- (ii) the validity coefficients of the tests against teachers ratings varied from .56 to .89;

- (iii) the validity coefficients of the tests against school annual examination marks in general science ranged from .516 to .832.
- (iv) the predictive validity coefficients for the annual examination marks obtained for the same sample ranged from .56 to .89 and
- (v) boys were significantly higher in achievement than girls.

THE INCIDENCE OF DROP-OUTS IN PRIMARY SCHOOLS IN  
WORLI (ELECTORAL WARD No.31) FOR SIX MONTHS BETWEEN  
SEPTEMBER 1955 AND FEB. 1956 AND THE FACTORS RESPONSIBLE  
FOR THE SAME, PRIMARY EDUCATION DEPARTMENT, BOMBAY, 1956.

( Author - BOMBAY MUNCIPAL CORPORATION )

It was observed that apart from the large incidence of non-attendance of children who fail to enroll themselves into school, there was a very difficult problem in the case of those who join school but drop out in the middle of the academic year. A continuous dropping out from schools is found in municipal schools. Dropping out of children throughout the academic year is a great handicap in the educational progress of the children concerned and involves wastage of funds and human energy. To understand the educational implications of the phenomenon of dropping out and to find ways and means to minimise the same, this study was planned with three objectives, viz., (i) to study the incidence of dropouts in municipal primary schools in the Worli area between 1st September, 1955 and 29th February, 1956, (ii) to compare the incidence of dropping out found in children of compulsory age and children who are overage (i.e. those who are over 11 years of age) in the Worli schools, and (iii) to analyse the reasons for the dropping out of children who left school without taking school leaving certificate.

All the sixteen schools in the Worli area (Electoral Ward No.31), with about 7,800 children on the roll, formed the sample for the study. Parents and guardians of about 1,000 compulsory age and overage children were contacted to get the correct reasons for the dropping out of children before completion of their schooling. Parents, guardians, and quite often, neighbours of 784 children who left school without taking their school leaving certificates were contacted personally. However, residence of fortythree children could not be traced. Therefore, the final sample of the study consisted of 741 children.

The study revealed that (i) 16.5 percent of the children on the rolls on 1st September 1955 left school within six months; (ii) monthwise analysis of dropouts shows that there are considerable number of dropouts every month but the number varies from month to month and it is difficult to point out any definite trends in the incidence of dropouts in different months; (iii) in every alternate month, from October 1955 to March 1956, there is a steep fall in the number of dropouts; (iv) the incidence of dropouts in standard I is alarmingly high; out of every 100 children on rolls in the first standard twentythree children dropout in six months time and about one in every four children in the class either terminates his studies or has his studies interrupted within a period varying from one to seven months of the commencement of schooling; (v) the percentage of dropouts falls sharply from twentythree percent in standard I to fourteen percent in standard II and goes on decreasing upto standard IV; (vi) though the loss in numbers in the first four standards varies from class to class, it must be admitted that there is considerable wastage in all classes, especially in the first two standards; (vii) there is an extremely high number of absentees in standard I and

steps should be taken to raise the daily attendance in this class; (viii) children who are older by two years or more than the average of the class leave school in large numbers before completing their lower primary education; (ix) dropouts in two age groups (6 to 11 and above 11 years of age) are found to be in the proportion of seventytwo percent and twentyeight percent; (x) one child in every five, in the first four standards, is above the age of eleven years and moreover, in standards III and IV, out of every eleven children, five are over age; in standard IV, the number of over age children is about twice as much as that of compulsory age; (xi) incidence of dropouts, among over age children, in standard I, is very high; (xii) in the compulsory age group, the incidence of dropping out is 16.8 percent among boys as against 19.4 percent in the case of girls; (xiii) the dropouts in standard I, in the compulsory age group, are numerically larger than the total dropouts in all the other standards, 56.4 percent in standard I and 43.6 percent in the other standards; (xiv) the number of dropouts in the compulsory age group progressively decreases in successive standards from 56.4 percent in standard I to 6.2 percent in standard IV; (xv) in the over age group the incidence of dropouts is numerically highest in standards IV and V; (xvi) in the compulsory age group, migration to native place is responsible for the dropping out of fortythree percent students; (xvii) truancy, which is responsible for 11.12 percent dropouts, ranks first among the reasons for dropping out, is followed by gainful employment at 3.11 percent, illness at 2.07 percent; and negligence of parents at 1.63 percent; (xviii) truancy is more frequent in the case of boys (13.5 percent) than in the case of girls (9.0 percent); (xix) in the over age group, the inability of parents to pay fees is the most frequent reason for the dropping out of children from school; and (xx) girls marry at a much earlier age than the boys and therefore, 3.9 percent of the girls dropout on account of marriage.

GROUP : II

VOLUME -I  
ABSTRACT -616

BOMBAY MUNICIPAL CORPORATION, STUDY OF THE EXTENT AND CAUSES OF NON-ATTENDANCE OF COMPULSORY AGE CHILDREN IN TEN DIFFERENT LOCALITIES IN GREATER BOMBAY (TOTAL POPULATION OF 48,086), PRIMARY EDUCATION DEPARTMENT, 1952.

In view of the findings of World survey, it was decided by the Research Advisory Committee that a larger sample should be studied in verification of the results obtained in the above cited survey.

The different localities in Greater Bombay were selected by restricted random sampling. The areas were selected mainly on the basis of the socio-economic condition of the people in the locality. The restrictions imposed being

- (i) representation of very poor, poor, middle and richer classes in the sample should, roughly, be in proportion to that found in Greater Bombay, and
- (ii) various industrial and commercial labour and different language groups should be included in the sample. The total population surveyed was 48,086. A proforma was developed. Enumerators visited every household to get all the ideas about the compulsory age children and the adult population in the localities.

The findings of the survey revealed that -

- (i) the total number of compulsory age children, i.e. children between the age of 6 and 11 years, enumerated was 4,969 (2,623 boys and 2,346 girls),
- (ii) the percentage of boys and girls to the total compulsory age children was 52.8 and 47.2, respectively;
- (iii) of the 4,969 compulsory age children enumerated in the survey, 960 (388 boys and 572 girls) were found to be non-attending;
- (iv) on account of factors like domestic work, looking after younger children at home and the education of girls was far behind that of boys even in the young and immature age group 6 to 11 years;
- (v) the incidence of nonattendance was very high in poorer areas and out of every 100 children of

compulsory age, on an average, twentyfour were not attending school due to various reasons;

- (vi) in the second (middle class) income group, on an average, out of every 100 compulsory age children, eight children were out of school;
- (vii) for the whole of Greater Bombay, only eightyone out of every 100 children of compulsory age received primary education, whereas remaining nineteen either had no schooling at all or had a different education ranging over a period of two months to about two years;
- (viii) one of the factors that was responsible for increased non-attendance was the continuous coming into going out of Bombay of a number of children and it was found, in the survey, that the incidence of nonattendance, due to this factor, was much lower than what was popularly believed;
- (ix) the incidence of non-attendance was much higher in the age group 6-7 years and 7-8 years than that in the age range 8-11 years;
- (x) the percentage of nonattending children decreased from year to year in each successive higher age group;
- (xi) both the present survey and the earlier survey (World) conclusively show that the incidence of nonattendance was remarkably high in the age group 6-8 years;
- (xii) out of every 100 nonattending children forty were boys and sixty were girls;
- (xiii) in case of both boys and girls, the number of nonattending children as well as the percentage of nonattendance steadily decreased with increase in the compulsory age group; in the case of boys the percentage of nonattendance dropped from 29.9 to 6.2 and in the case of girls from 37.5 to 14.6;
- (xiv) a marked variation was observed in the percentage of nonattending children to the compulsory age children in the different areas under survey, for instance, in the 6-7 years group the nonattendance varied from a figure as high as fiftyeight percent in the Colaba areas to as low as seven percent in Khar;
- (xv) about forty to fortyfive children, out of every



150 children, of compulsory age in the poor localities in Bombay either did not receive any education at all or got unsatisfactory and irregular schooling for short periods of time which more or less left them illiterate;

(xvi) fifty percent of the non-attending boys and forty-two percent of the non-attending girls did not get to school on account of lack of accommodation in nearby schools;

(xvii) Negligence of parents ranked highest and kept one in every four nonattending children from schooling;

(xviii) domestic work at home, looking after younger children, extreme poverty, doing odd jobs to supplement family income, truancy and liberation were reasons for non-attendance of compulsory age children; and

(xix) major reasons which were responsible for about eighty-five percent droouts were:

(a) negligence,

(b) no accommodation in school.

(c) domestic work,

(d) looking after younger children,

(e) admission refused on technical grounds, and

(i) truancy and stay at native place intermittently.



GROUP- II

VOLUME -I  
ABSTRACT -618

BOMBAY MUNICIPAL CORPORATION, PARALLEL CLASSES IN MUNICIPAL SCHOOLS, PRIMARY EDUCATION DEPARTMENT, 1966.

This experiment was prompted by the need for a convenient yet scientific and suitable method for dealing effectively with failures and under achievers in different subjects of the curriculum. Since the lag in the educational achievement of children who fail is generally not more than six months, they were streamed for instruction in parallel classes. The purpose of conducting the experiment was to reduce the incidence of stagnation and raise the standard of achievement in municipal schools; to save failures from wastage of a year and the mental setback due to the repetition of the class. The study also attempted to find:

- (i) to what extent child gains academically or otherwise through such parallel classes;
- (ii) at what stage in primary education it is more advantageous to have parallel classes;
- (iii) what are the administrative difficulties involved in starting such classes;
- (iv) whether these classes improve class attendance of the children. Five groups of 1030 students who failed in different standards were taken up for study. Their performance was studied, comparatively, to ascertain the extent of worthiness of the problem undertaken. Teachers in charge of such classes were trained for the purpose. They were instructed in the preparation of progress records, in assessment, and in teaching aids, etc. They were asked to elicit cooperation of the parents in this matter. On completion of the experiment, on the basis of results, 13.2 percent children were sent back to their previous classes and 61.1 percent were allowed to continue in regular higher standards. Twenty five percent found unfit for promotion were retained for further experimentation.

The suggestions given were that parallel classes can, advantageously, be started in standards I, II, and III and care should be taken that children get grounding in all subjects. The number of children in each class should be around 40 and they should be enrolled after final examination. Syllabus for such classes consist of unfinished portion of the previous year and it should be covered early in the first term, and the remaining part in the second term.



GROUP - II

VOLUME 1 II  
ABSTRACT 619

BOMBAY MUNICIPAL CORPORATION, STUDY OF THE INCIDENCE OF  
WASTAGE AND STAGNATION AND THE EFFECTIVENESS OF OUR EDUCA-  
TIONAL EFFORTS, PRIMARY EDUCATION DEPARTMENT, 1967.

The objective of the study was to determine the extent of wastage and stagnation in primary schools, the reasons for such wastage, the relation, if any, between stagnation and wastage, their relation to the age of the children, the subjects in which the children commonly fail, the reasons thereof, and other similar aspects of the problem.

About 6400 children selected from seventeen schools from years 1950 to 1958 were assigned to six groups so as to find out, by a comparative study, the performance of various groups.

It was found that percentage of children who left school fell from 43.3 to 21.4 in the years 1956 to 1958. About 86.6 percent of children continued in the school in 1957-58 after joining the school. It shows that wastage due to dropping out has been considerably reduced. It was also found that 92.9 percent children left school after one failure in 1957 as against 49.7 percent in 1950, and 3.46 percent left school, after passing as against 6.51 percent. This shows an intimate relationship between stagnation and wastage.



GROUP -II

VOLUME -I  
ABSTRACT -622

UNVESTIGATION INTO WASTAGE AND STAGNATION IN PRIMARY  
EDUCATION IN SATARA DISTRICT, GOKHALE INSTITUTE OF POLITICS  
AND ECONOMICS, POONA, 1963.

(V.M. DANDKAR)

The study was designed to find out the wastage and stagnation in primary education in Satara district.

The terms, wastage and stagnation, were defined and two questionnaires were prepared: one relating to the individual student and his guardian and the other relating to the conditions in the selected village schools. The first questionnaire completely covered both the wastage and stagnation enquiries. After a thorough discussion with inspectors and supervisors, the questionnaire schedules were revised, rearranged and sent to the headmasters. The obtained data was analysed, 1,778 cases of wastage and 1,264 cases of selected from the ex-pupils who had left the schools not more than three years ago and were selected from six talukas of Satara district which included twenty percent of the total population. The conditions in the voluntary schools were also examined and were compared with those prevailing in the local board schools. Causes underlying the wastage and stagnation were also discussed.

The study reveals that out of every 10,000 students entering the school system, 6,388 pass standard III and 3,512 leave school without passing it. Of these, 1,932 leave in infant class, 706 leave in standard I, 504 leave in standard II, and 470 leave in standard III. Of the 6,388 who pass standard III, 1,810 pass without a single failure in the school career, 1,768 pass with two or more failures. Of these 1,405 meet their second failure in infant class, 547 in standard I, 458 in standard II and 420 in standard III. Considered from the point of view of number of students failing to complete the third standard, 26.12 percent students are to be considered as wastage cases. Of the total educational efforts expended on the infant class and the first three standards, about twentyeight percent is ultimately wasted, while of the remaining, about twentyeight percent is due to the phenomenon of stagnation. As compared with the local board schools, the extent of wastage in voluntary schools is actually smaller in the infant class, but it is increasingly greater in higher standards. On the other hand, stagnation appears more prevalent in the infant class, but less so in the higher standards.





GROUP - II

VOLUME - I  
ABSTRACT - 625

COMPULSORY PRIMARY EDUCATION IN INDIA, PH.D. EDU, BOM.  
U., 1951

(D.M. DESAI)

The principal aim of the present investigation was to study in depth the problem of universal, compulsory, free and secular education in general and primary education in particular in India.

The problem of compulsory primary education was investigated from several angles keeping in mind the needs of the teeming millions, background of the educational practice under British rule in India, and the present day cherished political ideals. For convenience the study was divided into three parts. Part one dealt with the philosophy of education, part two, historical aspect, and part three, the future reconstruction of compulsory primary education. Government records, minutes of the committee meetings, views expressed by the national leaders on the subject both inside and outside the assemblies and other related literature formed the source material for data collection. Data were also collected from foreign journals and literature.

Part I, i.e. philosophy of education, expounded the ideas such as universalism in education, universalism of primary education, how universalism was lost and came into being again after some time, contribution of monarchic rule to the universalism of education, labour demands of education, factory legislation, and contribution of democracy to evolution of the concept of universalism in education.

In part two, the study dealt with the salient features of compulsory educational practices in countries like, U.S.A., U.K., Philippines, U.S.S.R., China, Egypt and Germany with special reference to Martin Luther's teaching who believed that every child ought to learn to read and write in order that he might be able to read the scripture for himself. In the final part the author discussed that the foreign rule in India introduced the education of the classes but not of the masses and this prompted the leaders to adopt the idea of the compulso<sup>r</sup> primary education. And also the social, economical and political forces were responsible to a great extent for the innanda, Surendranath Banerjee, B.M. Malbari Mahadeo Govind Ranade, P. Ananda Charlu, Lal Mohan Ghose, Gopal Krishna Gokhale, Pandit Madan Mohan Malaviya, etc., were the pioneers in the movement and the waged great battles both inside and outside the legislatures to make the government of the day accept the responsibility for the introduction of free primary education in the country. Sir Ibrahim Rahimtoola pleaded for the introduction of free and compulsory primary education in Bombay city. Likewise, Chimanlal

Setalvad, Gopal Krishna Gokhale made herculean attempts to make government accept the principle of compulsory primary education but only to meet with failure. Vithalbhai Patel introduced a bill in Bombay provincial Assembly and it was adopted in 1918. This was the first milestone in the ongoing journey. It has since then become a welcome sign all over the country and many provincial legislatures followed suit. Between 1917 and 1950 almost all the states in the country had passed legislations regarding compulsory primary education and the principles of free education were tentatively accepted by adapting measures to ensure that inability to pay school fees did not become an excuse for not sending children to school. Realisation of the importance of the compulsory primary education is one thing and the ability to provide for it is quite another thing. West Bengal, for example, though adopted the measures as early as in 1919, only in one ward of Calcutta city, they were able to introduce compulsory education. Same was the case in almost all the states. The only area which had shown effective progress was Bombay which introduced compulsory education in 104 towns and 5,267 villages.

The author has divided the whole history of universal, compulsory and free primary education in six periods. The first period began in 1813, when the government accepted their responsibility for the education of the people, and ended in 1882 when the Indian Education Commission was appointed. The second period from 1882 to 1910, when Gokhale his resolution on compulsory education. During this period, the agitation for the introduction of compulsory education was taken by Indian leaders the success achieved was very little mainly due to the fact that public opinion had not gathered sufficient strength to influence the policies of the government. It was during this period that His Highness the Maharaja Sayajirao of Baroda of Baroda introduced compulsory primary education as an 'experimental measure' in a part of his state in 1893. It was extended to the whole state in 1906. The third period extends from 1910 to 1917 and covers the heroic, though almost futile, attempts of Gokhale to induce the government to accept the principle of compulsory primary education. The fourth period extends from 1917 to 1930, when the of compulsory education was accepted by one province after another on the statute book of almost every province in British India as well as some important Indian states. The fifth state extends from 1930 to 1950, when compulsory education was introduced as an experimental measures in a few areas. During the sixth stage determined efforts have been made to introduce compulsory education in all parts of the country within as short a period as possible so as to implement Article 45 of the Constitution of India.

The lack of enthusiasm for the effective introduction of the following factors;

- (i) financial difficulties of all the state governments to take up such a huge project;
- (ii) Hartog committee report changed the attitude of the state governments;
- (iii) the fact left the position vague to enable the state governments to introduce compulsory education either for boys or for girls or for both;
- (iv) the law was powerless in the case of those who were too poor to send their children to school;
- (v) the estimated cost of introduction of the scheme was so high that it was absolutely beyond practical finances.

The study also referred to the problems in educational administration such as admission and withdrawals, single -teacher schools, securing necessary teaching personnel for rural areas, and the problem of supervision.



GROUP -II

VOLUME -I  
ABSTRACT .645

AN INVESTIGATION INTO THE CONDITION OF PRIMARY EDUCATION IN THE EDUCATIONALLY BACKWARD PARTS OF THE POONA MUNICIPAL CORPORATION AREA WITH SPECIAL REFERENCE TO, (a) NON-ATTENDANCE OF PUPILS COMING UNDER THE PROVISIONS OF THE PRIMARY EDUCATION ACT OF 1947, AND (b) IRREGULAR ATTENDANCE OF PUPILS ACTUALLY UNDER INSTRUCTION, PH.D. EDU., POONA U. 1960

(S.P. SANB)

The aim of this investigation was to study the conditions of primary education in the educationally backward parts of the Poona Municipal Corporation area with special reference to non-attendance of pupils coming under the provisions of the Primary Education Act of 1947, and irregular attendance of pupils actually under instruction.

Along with scanning of literature and intensive study of records about causes of irregular attendance, questionnaires and interview schedules were used as research tools for collection of data.

The salient findings of the study were -

- (i) girls' education was neglected due to the old beliefs and traditions;
- (ii) ignorance of the advantages of education and wrong ideas about it were widely prevalent;
- (iii) people living away from the enlightened society did not change for years;
- (iv) ~~or~~ orphans and children whose parents had strained relations needed more help;
- (v) there was slow progress in some wards though the compulsory education scheme was in operation there;
- (vi) the cooperation of the people in the locality was felt essential;
- (vii) more disciplinary actions were necessary;
- (viii) school courses did not attract parents and
- (ix) some help was necessary for the handicapped and nomads. In the case of irregular attendance, the study revealed that -
  - (1) children avoided schools as they could not adjust to the crowded classes and school discipline;

- (ii) parents thought that the curriculum was totally useless;
- (iii) teachers failed to create an urge for education;
- (iv) supervision and inspection needed improvement;
- (v) domestic difficulties, and lack of hygienic facilities also contributed to irregular attendance.

GROUP -II

VOLUME -I  
ABSTRACT -657

THE PLACE OF SHIFT SYSTEM IN PRIMARY SCHOOLS IN BOMBAY STATE, PH.D. EDU., BOM, U.1959.

(J.B. TANNU)

The present investigation aimed at examining various aspects of working of the shift system, in primary schools in Bombay, and suggest ways and means for efficient running of the schools so as to realise the objectives for which it was introduced.

The data for the study were collected from the literature available on the subject, departmental reports and information collected through the tests administered. Five pairs of schools, from schools having shift system and schools without shift system, were selected as sample for the study. One thousand students were administered the tests in languages, arithmetic, and general knowledge. Fifty students were randomly selected for the administration of mental tests for the purpose of computing I.Q.s.

The following were the findings of the study-

- (i) three hours instruction was given to the children in the shift system schools and five hours instruction to the children attending full time schools;
- (ii) the school timings in the shift systems were ill-adjusted as they were fixed according to the availability of the school building;
- (iii) odd timings of the shift system schools resulted in poor attendance of the children;
- (iv) promotions in the shift system schools were not strictly based on merit but on other considerations. The investigator has offered a model scheme for the shift system which enshrines the following objectives in it;
  - (i) reducing the expenditure.
  - (ii) lessening the problems of accommodation, and making more seats available in schools without increasing the number of teachers.





GROUP -II

VOLUME- I

ABSTRACT-704

BOMBAY MUNICIPAL CORPORATION, A STUDY OF THE AGE OF ENTRY OF ALL CHILDREN IN STANDARD I, 6,041 CHILDREN IN THIRTY SCHOOLS IN THE LOCALITIES UNDER SURVEY, PRIMARY EDUCATION DEPARTMENT, 1958.

The major aim of the investigation was to study the age of entry of children to standard I. The study was expected to verify and supplement the findings relating to the age-wise analysis of non-attending children.

A sample of thirty schools was selected randomly. In the thirty schools, there were 6,041 children in Standard I of which 4,995 were new entrants who had joined school between June and August 1957, and 1,046 were repeaters. The new entrants were seventy-nine percent and the repeaters were twenty-one percent of the total.

The findings of the study are:

- (i) only sixty-seven percent of the new entrants in standard I are between five years six months and seven years of age, whereas the remaining thirty-three percent are above seven years of age;
- (ii) among the children who fail in standard I, eighteen percent join school when they are about five years and nine months and the age of entry of thirty-five percent is between six and seven years and as large a percentage as forty-seven join after the age of seven which shows that entrance to school at an early age has not been the reason for stagnation;
- (iii) only about sixty-five percent of the children in standard I are below the age of seven years, whereas thirty-five percent join school for the first time after they are seven years of age;
- (iv) age of entry to standard I varies in different localities and the factors responsible for such a variation are socio-economic conditions of the inhabitants of the locality;
- (v) on an average, in the age group of five to seven, only fifty-five percent of children who enter standard I are from poor localities which shows, definitely, that a large number of children fail to join school till they reach the age of

seven years, whereas in economically and socially better areas the percentage is eightyone;

- (vii) no marked difference in the age of entry of the two sexes is observed in the study; and /
- (viii) the age of entry of children to school depends largely on the attitude of the parents and to a great extent on the availability of schooling facilities near the residence of children and on the socio-economic status level of the parents.

GROUP II

VOLUME II  
ABSTRACT-31

A SURVEY OF BASIC EDUCATION DURING THE  
PAST THIRTY YEARS AND ITS EFFECT ON  
EDUCATION IN GENERAL AND SOCIETY IN  
PARTICULAR, H.D. EDU., BOM. U., 1977.

(Author: L. Kansara)

The major objectives of the study were: (i) to study the source of Basic Education leading to its development; (ii) to study the progress of Basic Education in pre-independence and post independence era; (iii) to understand fully the theory, principles, and practices of Basic Education; (iv) to make a comparative study of the scheme of Basic Education and various other Indian systems of education; (v) to find out the impact of Basic Education on the development of persons who received Basic Education; and (vi) to find out the effect of Basic Training on prospective teachers. The specific focus of the study was on Gujarat State.

The major tools of data collection were library studies, questionnaire, opinionnaire and interviews. A small experiment was also conducted to find out children's natural interests and attitude through setting a small handicraft class. One questionnaire, meant for all persons knowing about Basic Education and educationists in general, was distributed to 147 persons. A second questionnaire, meant for staff of the Basic Training colleges, was completed by 509 out of 695 persons. A third questionnaire, meant for final year children of Senior Basic schools, was filled in by 335 out of 636 children.

The main findings were: (i) Basic Education includes all good points of ancient and modern educational systems of India and almost all educational innovations. (ii) The system can foster further

innovation. (iii) It satisfied the basic inherent educational needs of the child and through this it achieves the cherished national goals and social needs. (iv) The system is economical, self-supporting, and self-sufficient. (v) The system encourages play-way approach through practical experiences and further creates a living interest and curiosity for knowledge. (vi) It stimulates self-expression, enjoyment, liberty and nearness to nature. (vii) It builds better pupil-teacher relationship, inner discipline and mutual co-operation. (viii) It inculcates healthy attitude to work. (ix) It integrates both formal and nonformal learning. (x) Compared to other systems, Basic Education develops dignity of work, socialisation, and wider outlook of thinking. (xi) In urban areas the teachers are sceptical of education through crafts. (xii) Variety of crafts have not been used in Basic Education. (xiii) Exclusion of English in Basic Education is not liked by parents.

GROUP II

VOLUME II  
ABSTRACT-143

A CRITICAL STUDY OF THE PROFESSIONAL,  
FAMILIAL, SOCIAL AND ECONOMICAL CONDITIONS  
OF WOMEN TEACHERS WORKING IN THE PRIMARY  
SCHOOLS OF GREATER BOMBAY MUNICIPAL  
CORPORATION, PH.D. EDU., SNDT, 1976.

(Author: P.A. Samant)

The main objectives of the study were: (i) to study critically the professional, familial, social and economical conditions of women teachers working in primary schools of Greater Bombay Municipal Corporation; (ii) to locate the problems of women primary teachers; (iii) to suggest, on the basis of the findings, practical measures for helping to solve the problems.

The sample consisted of randomly selected 1035 women teachers and eightyfour head teachers from various beats of primary schools of Greater Bombay Municipal Corporation. Normative survey method was used for the study. Data were collected through: (i) questionnaires for (a) women teachers and (b) head teachers; (ii) interviews conducted on (a) women teachers, (b) head teachers, (c) parents, and (d) librarians; (iii) observations of 300 schools with regard to the daily work and buildings; and (iv) discussions with (a) the research officer, (b) superintendents, and (c) beat officers of Greater Bombay Municipal Corporation.

The important findings of the study were as follows: (i) Women teachers could not prepare properly for their teaching due to want of time. They needed more guidance from higher authorities. (ii) Co-curricular activities were not planned in proper manner. (iii) Opportunities for getting the inservice training were not same for all the teachers. The teachers were not enthusiastic to utilise them. (iv) Annual

inspection fell short of evaluating correctly the teacher's work during an academic year. (v) The teachers did not get sufficient co-operation from parents. This created many difficulties in the progress of children. (vi) There was no provision of pre-primary classes in municipal schools. So good habits were not cultivated among the children in the beginning itself. (vii) Teachers were displeased as there was no definite and proper policy for the transfer of teachers from school to school. (viii) The women teachers took more leave than expected and no substitute was provided in place of a teacher on leave. Proportion of leave reserve teachers was insufficient. (ix) The children of the women teachers could not be looked after properly. They had to be entrusted to servants or neighbours or improperly run creches.

GROUP II

VOLUME II

ABSTRACT-233

AN EXPERIMENTAL STUDY OF SOME METHODS OF  
TRAINING IN CREATIVITY, Ph.D. Psy.,  
POONA U., 1977.

(Author: A.M. Nirpharake)

The study aimed at developing an integrated programme of training in creativity and testing it experimentally on the high IQ - low creativity children in the seventh grade. For the purposes of training, four vital areas of creativity, namely, cognition or perception, divergent production evaluation and appreciation and creative problem solving, were selected. The hypotheses of the study were: (i) the control group receiving no training would not make any significant improvement in creative thinking; (ii) all the experimental groups, receiving training in at least one area would make significant improvement; (iii) the performance of the experimental groups on the creativity test after training would be significantly better than the performance of the control group after the period of no training; (iv) the experimental group receiving training in all four areas would make the highest improvement; and (v) the four training programmes would differ in their influence on the subjects' performance, with divergent production resulting in improvement greater than the others.

The sample consisted of thirtysix boys in grade VII, coming from middle class families with urban background in Poona city with superior intelligence and normal level of creativity. Creativity was measured by the Torrance Test of Creative Thinking. The training programme for creativity consisted of 100 sessions, 25 sessions devoted to each area of creativity. The general procedure was as follows: First, general introduction to the programme and instructions, then, short lectures on the principles followed by discussions, demonstration of a technique by the experimenter, exercises on it by subjects individually and collectively, again followed by discussion. Procedures like group problem solving and role playing were also utilized whenever there were opportunities.

All the hypotheses except the last one were accepted. It indicated that even short periods of training in creativity would bring about fruitful results; however, the durability and transfer of this improvement remained to be explored.





GROUP II

VOLUME II  
ABSTRACT-365

PHYSICAL NORMS OF GUJARATI CHILDREN,  
GUJARAT RESEARCH SOCIETY, BOMBAY, 1959.  
(MOE FINANCED)

(Author: P.G. Shah)

The study aimed at establishing physical norms in terms of heights and weights for Gujarati speaking school going children in Greater Bombay city and suburban areas.

The study was conducted by employing normative survey method. The sample belonged to fortyone schools of the city and suburbs of Bombay. As many as 15,852 Gujarati speaking school going pupils were selected. These were 9,564 boys and 6,288 girls. The age range was six years to twenty years. The selection of sample subjects was guided by factors like economic, social, cultural background and also age, sex, and mother tongue of the pupils. For collecting data related to age, sex, weight, height, income of parents, etc., a data card was developed. To have accurate data, detailed procedures and outlines for measurements of height and weight were prepared. Also the field workers were sufficiently trained. Descriptive statistics like mean, median, standard deviation, percentage, etc., were worked out. Absolute and relative growth rates, height quotient and weight quotient were worked out.

The study had the following main findings: (i) the average height was found to be increasing upto nineteen years for boys and seventeen years for girls; (ii) the average weights of boys and girls was found to be increasing with age with differences in growth rates; (iii) the growth of both vegetarian as well as non-vegetarian boys and girls with respect to their height as well as weight was almost same except in case of girls in earlier age groups and later age groups; (iv) the chest girth was found to be increasing till the age of fifteen years for girls and twenty years in case of boys; (v) height quotient (HQ) and weight quotient (WQ) tables had been provided for boys and girls.



GROUP II

VOLUME II  
ABSTRACT-399

TEACHING READING TO BEGINNERS - A  
METHODOLOGICAL STUDY, PH.D. EDU.,  
POONA U., 1973.

(Author V.S. Deshpande)

The objectives of the study were to evolve a process for (i) general improvement in school learning; (ii) improvement in the thought process; (iii) improvement in the preparation of vocabulary lists and reading materials; (iv) improvement in the methodology of teaching reading in the beginning; and (v) improvement in the methodology of evaluation of the reading programme. The hypotheses tested were: (i) the present beginning reading programme would be based on the old concept of reading and it would fail to create readers who would read with the expected speed of comprehension; (ii) the new reading programme, based on the modern concept of reading would create good readers who would be able to read with the expected speed of comprehension; and (iii) if the above hypotheses are experimentally tested, the difference between the means of the speed of comprehension of both the groups would be favourable to the new reading programme and would be statistically significant.

The sample consisted of 2000 pupils who entered the first grade of the primary school. These subjects were selected from fortyeight classes from the city of Poona and adjoining villages. Again, these students were selected on the bases of intelligence, physical maturity, socio-economic status of the parents and educational facilities available. To match the parallel groups, the principle of normal probability curve was used for the bases of intelligence and physical maturity. The schools were equated with the help of the inspection reports of the previous two

years. Each of the two groups, experimental and control, consisted of nearly 1000 pupils. With a view to comparing the achievements of both the groups in the speed of comprehension and with a view to finding out how people would accept the new reading programme in future, a reading test, questionnaires for the teachers and the headmasters of the experimental group, and experts' opinions were used.

The study revealed that (i) the total performance of the experimental group children on the reading test was better than that of control group children and the difference between the mean scores of both the groups was found to be statistically significant; (ii) the experimental reading programme made no extra demands on the time of teacher and was carried out in normal conditions and the new reading programme was approved and appreciated by the teachers, headmasters and the experts also; and (iii) it was found that the hypotheses were found statistically significant and the reaction of those who implemented and did not implement favoured the experimental reading programme.

GROUP II

VOLUME II  
ABSTRACT-405

A LINGUISTIC STUDY OF ERRORS IN ENGLISH  
OF MIDDLE SCHOOL PUPILS OF CHANDRAPUR (CHANDA)  
DISTRICT OF NORTH-EAST MAHARASHTRA, PH.D.  
LINGUISTICS, POONA U., 1968.

(Author: C.D. Indapurkar)

The objectives of the study were: (i) to describe the various types of errors found in the spoken and written English of the middle school pupils; (ii) to classify the above errors suitably; (iii) to find out whether there are any common trends in these errors; (iv) to find out the errors which continue throughout the middle school standards; (v) to find out the probable causes of these errors with special reference to the interference of Marathi, the mother tongue of these pupils; and (vi) to have a comparative study of some frequent errors in written and spoken English.

The sample for the study included the students of two coeducational middle schools (standards V to VIII), many of whom came from rural area where sufficient and proper facilities of secondary education were not available. Data were collected through oral tests (N=240) to examine errors in spoken English, administration of written tests (N=320) to examine the errors in written English, and assessment of annual examination answer papers (N=160). Students of standard VIII were not included for oral test which was the main basis of the study. The tests used were developed for the present study and they assessed the errors committed in grammatical structures in English. The errors located through the study were classified as lexical errors, morphological errors, errors regarding function words, errors at the phrase level, errors at sentence level and errors regarding the writing system. The frequencies and percentages of errors committed by pupils were computed.

The following were the findings of the study:  
(i) The lexical errors were not frequent in any

standard as revealed in oral test. But the assessment of annual examination papers revealed that the error of replacing proper word to phonetically resembling word was very frequent both in standards VII and VIII. (ii) Regarding morphological errors, the analysis of annual examination answer scripts revealed that in standards VI, VII and VIII, the error of verbal inflection type was very frequent. The oral test revealed that in standard VIII, the error of verbal inflection was very frequent in standards V, VI and VII. The written test revealed that in standard VIII, the error of verbal inflection was very frequent. (iii) The errors of pronouns were very frequent as revealed in oral test. Very frequent errors regarding articles were revealed in oral test and analysis of annual examination answer scripts, but were missing in the written test. (iv) The analysis of annual examination answer scripts revealed that in standards V, VI and VII, the very frequent errors were regarding nominal phrase structure. The oral test revealed that in standards V and VI, very frequent errors were found regarding verbal phrase structure. The written test revealed that very frequent errors regarding prepositional phrase structure were found in standard VIII.

GROUP II

VOLUME II  
ABSTRACT-440

DEVELOPMENT OF A CURRICULUM IN SCIENCE FOR  
SECONDARY SCHOOLS IN THE STATE OF MAHARASHTRA,  
PH.D. ELU., B.M. U., 1977.

(Author: U.S. Singh)

The objectives of the study were: (i) to evaluate the present science curriculum of standard VIII in vogue from 1972; (ii) to modify the present curriculum with a view to achieving Skill Oriented Objectives of the teaching of science; and (iii) to finalise a practical and progressive science curriculum, after a tryout.

The existing science curriculum was evaluated by questionnaire and interviews. On the basis of the opinions of experienced and trained science teachers, the curriculum was modified and made more skill-oriented. Two groups of students of standard VIII of six English medium high schools in Bombay were selected for experimentation. The two groups were matched on the basis of achievement of the pupils in science in standard VII. The previous knowledge of the two groups was measured by a pretest based on the curriculum of standard VIII. The modified curriculum was taught to the experimental group and the existing curriculum was taught to the control group. After teaching both the curricula, a posttest was administered to both the groups. Significance of the difference between means was computed.

The major findings of the study were: (i) significant difference between the means of achievement in knowledge objective was found in three out of six schools; (ii) significant difference between the means of achievement in skill objective was found in all the schools; and (iii) significant difference between the means of achievement in application objective was found in five out of the six schools. The investigator concluded that the curriculum suggested was more suitable than the existing curriculum and that the existing science curriculum in force in the State needed modification.





GROUP II

VOLUME II  
ABSTRACT -444

AN ANALYTICAL STUDY OF THE USE OF  
FILMSTRIPS IN TEACHING OF SCIENCE,  
PH.D. EDU., SHI. U., 1975.

(Author: M.S. Sonar)

The major objectives of the present investigation were as follows: (i) to study the available filmstrips and filmstrip projectors; (ii) to locate the spots in the primary school syllabus wherein filmstrip teaching can be resorted to, either to supplement laboratory work or to revise, present new matter, and stimulate interest; (iii) to design new strips where they are not available at present and try them out in teaching with a view to watching their impact; and (iv) to draw up a plan of popularising the use of filmstrips in primary schools through various ways.

The study was mainly analytical. Filmstrips and filmstrip projectors were analytically studied with respect to design, content, utility, and correlation with primary science syllabus and textbooks. Twenty filmstrips in Marathi on general science were prepared on the basis of textbooks prescribed by the government. For evaluating the produced text filmstrips, evaluation forms were developed, and these were filled in by the teachers after seeing the filmstrips. The produced filmstrips were tried on students in standards V, VI and VII. Different filmstrip projectors were examined and their technical data also were analysed to find out their suitability for use in primary schools. An improvised filmstrip projector operating on solar energy was developed. In the analysis of syllabus and textbooks topics were isolated wherein no suitable filmstrips were available. Statistical information about primary schools, teachers and students was also analysed.

The main findings of the study were as follows:  
(i) Very few filmstrips produced and available at present in the country correlate with syllabus and textbooks. (ii) Filmstrips correlated with text and in

regional languages help to increase the knowledge of students. (iii) Almost all topics in general science syllabus and the textbooks can be effectively taught with the help of filmstrips. (iv) The cost of filmstrips can be largely reduced if they are produced in large quantities. (v) Systematic planning is essential in using filmstrips and filmstrip projectors in primary school teaching. (vi) The use of these instructional aids indicates the possibility of improvement in the methodology of science teaching, raising the standard of science education in primary schools, and development of taste and interest in the younger generation for the science subjects.

GROUP II

VOLUME II  
ABSTRACT-513

ASSESSING THE IMPACT OF NUTRITION EDUCATION  
PROGRAM ON PUPILS AND TEACHERS OF ELEMENTARY  
SCHOOLS, PH.D. EDU., POONA U., 1972.

(Author: R.R. Shirur)

The major objectives were: (i) to make the teachers realise the value and importance of nutrition education and services; (ii) to improve the knowledge and understanding of teachers and pupils in food and health; (iii) to formulate the concepts for teachers; (iv) to evolve teaching techniques and materials; (v) to experiment with the different techniques and materials evolved and evaluate them; (vi) to correlate and integrate nutrition education and services with other learning areas and activities of the school; (vii) to measure the impact of techniques and materials on the teachers' and the pupils' knowledge and application of nutritional principles; and (viii) to prepare a teachers' handbook on nutrition.

The sample represented the two developmental blocks - Wada and Indapur of western Maharashtra. Wada represented a backward community while Indapur a forward one. All the schools in both the blocks within a radius of twenty kilometres from the town (fifty-nine and forty-one) were covered. The schools were stratified into types as single-teacher, double-teacher and multi-teacher schools and these were randomly allotted to the control and experimental groups. The school, treated as a unit, was allotted to one of the groups. A detailed examination of the existing syllabi in general science, health and hygiene, and of various visual aids for elementary schools was made. Textbooks in general science were scrutinised in order to find out the content areas on 'food and health'. Teachers from a large number of schools in both blocks were interviewed individually and in groups to appraise and discuss the food grown locally, seasonal and scarce food, and regarding feeding programme whenever it was in operation. Nutrition tests of objective type for pupils of grades I, III, IV and VI and for teachers were constructed to assess their

nutritional knowledge and application. These tests were tried out on small samples and item analysis was conducted to compute the discrimination and difficulty indices before accepting the items for final administration. Prior to revision these tests were administered to pupils and teachers before starting the experiment in order to know the initial level of knowledge of teachers and pupils in nutrition. A nutrition guide book was prepared for teachers based on syllabi for grades I to IV and VI. For experimental group an orientation course was conducted. The education programme was conducted in both the blocks for seven months. At the end of the programme, same tests were repeated on the pupils of grades I to IV and VI and the teachers in both experimental and control groups. A gap of fortyfive days was given before administering the post-treatment test. An opinionnaire was administered at the end of the programme to collect information on several aspects of the guidebook and on education programme. Prior to and after the experiment the teachers from experimental group were asked to collect information regarding: (i) week's menu (qualitative) of each child in grade IV and VI; and (ii) a record (qualitative) of eatables purchased by each pupil in grades I to IV. Teachers were informed to maintain records of the pupils' progress in learning reading and writing as the study involved teaching nutrition through language. For analysis of data t tests were computed between the scores of controlled and experimental groups.

The findings revealed: (i) the concepts or the topics included in the syllabi for different grades were not clear cut and specific; they did not suggest content areas of teaching; (ii) textbooks in general science used by teachers were inadequate for the purpose of teaching; (iii) ten major nutrition concepts were found useful for teachers; (iv) as a result of experiment, there was an improvement from eighteen percent to fiftyfive percent of pupils who could read well and seventeen percent to fiftyfive percent who could write well (grade II); (v) consequent to the education programme, pupils developed better habits and attitudes towards food; (vi) there was positive impact of education programme on the teachers; (vii) the feeding programme in the school had no influence on the knowledge of the pupils on nutrition; and (viii) the education programme increased the nutrition knowledge of the pupils and teachers.

GROUP II

VOLUME II  
ABSTRACT-537

CONSTRUCTION AND STANDARDISATION OF ACHIEVEMENT  
TESTS IN GUJARATI FOR STANDARDS V, VI,  
AND VII, BOMBAY, 1963. (MOE AND NCERT  
FINANCED)

(Author: Gujarat Research Society)

The aim of this project was to construct and standardise achievement tests in Gujarati, Hindi, arithmetic, history, geography and science for classes V, VI, and VII.

The following three types of tests were constructed: (i) recall - simple recall and completion, (ii) recognition - multiple choice, matching and true false type, and (iii) figure type. A sample of 100 students was taken for the purpose of pretryout of the test. For the pilot testing, the sample consisted of 370 students for each test. For the final study, the sample comprised 939 boys and 640 girls from thirtyfive Gujarati medium schools of Bombay city. Correlation was used as the statistical measure for analysing the data. Age norms, grade norms, percentile norms and standard score norms were also worked out.

It was found that (i) the split-half reliability coefficient of the tests ranged from 0.79 to 0.99, and (ii) the validity coefficient of the tests ranged between 0.21 and 0.77.



GROUP II

VOLUME II  
ABSTRACT- 539

CONSTRUCTION AND STANDARDISATION OF ACHIEVEMENT TESTS IN GENERAL SCIENCE FOR STANDARDS V, VI and VII FOR CHILDREN STUDYING THROUGH SINDHI AS THE MEDIUM OF INSTRUCTION IN GREATER BOMBAY, PH.D. EDU., DCM. U., 1973.

The objective of this study was to construct and standardise achievement tests in general science for standards V, VI and VII for children studying through Sindhi medium in greater Bombay.

The pre-tryout test was administered to a sample of 100 students from each of the standards V, VI, and VII. The sample was drawn from schools situated in different localities and included students from all strata of the society. The tryout form of the test was administered to a random sample of 185 students in each of the standards V, VI and VII. The selection of the items for the final run was based on the specifications of the contents and the difficulty value and discriminating power of each item. The final form of the test was administered to 410 pupils of standard V, 380 pupils of standard VI, and 440 pupils of standard VII.

The reliability coefficients computed by different methods for the three tests were as follows:

- (i) test-retest method - ranging from 0.92 to 0.96;
  - (ii) split-half method - ranging from 0.96 to 0.97;
  - (iii) K-R formula - ranging from 0.86 to 0.90;
  - and (iv) Rulon's formula - ranging from 0.88 to 0.91.
- The validity of the tests was found to be (i) between 0.94 and 0.98 by correlating test scores with the annual examination marks, and (ii) between 0.88 and 0.93 by correlating test scores with the teachers' rating (rank correlation method). Stanines, percentiles, standard scores and T-scores were worked out.





GROUP II

VOLUME II  
ABSTRACT-550

PREPARING STATE NORMS FOR DELTA CLASS  
(STANDARD VIII) LANGUAGE (HINDI), HISTORY  
AND GEOGRAPHY, P.H.D. EDU., BOM. U., 1977

(Author: J.M. Patel)

The objectives of the study were: (i) to prepare achievement tests in Hindi, History and Geography for the delta class; (ii) to standardise the achievement tests in Hindi, History and Geography prepared for the delta class; (iii) to determine state norms for pupils on the basis of newly prepared tests in Hindi, History and Geography for the delta class; (iv) to study intergroup achievement in the subjects; (v) to judge the quality of the developed tests; (vi) to provide schools with a reliable and valid tool for measuring their pupils' achievement in Hindi, History and Geography for the delta class.

Three tests were prepared on the basis of the syllabus and textbooks published by the Department of Education, Government of Gujarat for the classes V, VI and VII.

The findings of the study were: (i) pupils were able to achieve only fifty percent or even less than that; (ii) memory, practice and test familiarity did not affect the test scores of all the three tests; (iii) the mean difference between urban boys and urban girls was not significant; (iv) pupils of urban areas were high achievers; (v) rural girls were superior to rural boys in all the three tests; and (vi) there was a direct relationship between achievement and age..



GROUP II

VOLUME II  
ABSTRACT-552

CONSTRUCTION AND STANDARDISATION OF UNIT  
TESTS IN PHYSICS FOR PUPILS OF STANDARD  
VIII, PH.D. EDU., POONA U., 1977.

(Author: V. Z. Sali)

The objective of the study was to construct and standardise five unit tests in physics for standard VIII for Maharashtra State Board Secondary Schools.

The sample for each unit test during the pilot study ranged from 107 to 149 students (both boys and girls) in standard VIII drawn from six schools in Poona district. Item analysis was carried out. The final form of the study was administered on a sample constituting 6130 students studying in standard VIII of thirty-one schools in Poona district.

Norms were developed in the form of percentiles, stanines, Z-scores and T-scores. Reliabilities obtained through K-R 21 ranged between 0.65 and 0.79 for the five unit tests. By Stanley's formula, the  $r$ 's ranged between 0.68 and 0.83. Content validity was determined on the basis of internal consistency of the test. Validity coefficients ranging between 0.69 and 0.80 were obtained when validated against teachers' assessment in terms of ranks.

SR



GROUP II

VOLUME II  
ABSTRACT-682

AN INVESTIGATION INTO THE PURPOSES,  
FUNCTIONS AND SPECIAL PROBLEMS OF ONE  
TEACHER SCHOOL IN WESTERN MAHARASHTRA,  
PH.D. EDU., ENDT, 1973.

(Author: S.V. Joshi)

The main objectives of the study were to investigate whether (i) the one teacher schools were functioning properly and carrying out their everyday programmes as expected, (ii) the daily attendance of pupils was very low, (iii) the schools had very low academic standard, (iv) the minimum educational facility was available to the students, (v) the rural people were interested in educating their wards in these schools, (vi) the teachers showed interest and enthusiasm in teaching and in other works of these schools, and (vii) these schools were inspected occasionally and the teachers were guided by the higher authorities.

Three western districts of Maharashtra were selected as the geographical sample. The types of schools selected were: (i) one school from rural area; (ii) Marathi medium schools; and (iii) twentyfive percent of the schools in the block area in each district. In this survey type of study, questionnaire and interview were the main tools which were administered to (i) the teachers of the selected schools; (ii) prominent persons of the villages; (iii) students of standards I to IV of the schools (test questions), (iv) all inspecting officers in the district, (v) all block development officers, and (vi) all chairmen of the Panchayat Samiti of the districts. The data were collected in persons.

A number of useful findings of a factual nature have been drawn.



Group.II

Vol.III  
Abstract-240

SOCIOLOGICAL SURVEY OF PRIMARY TEACHERS OF GUJARATI  
MEDIUM SCHOOLS IN GREATER BOMBA Y

( Author- K.Y. Roy., Ph.D., Soc. SNTD, 1975)

The study was undertaken to inquire into  
(i) The importance of educational management  
in the management of a society.

(ii) place and importance of teaching as an occupation

(iii) The studies on sociology of education in India.

(iv) The educational system and the standard of  
education in India.

(v) The history of primary education in the city  
of bombay, and

(vi) The sociological status of the primary teachers  
of Gujarati medium schools in Greater Bombay.

The sample included 80 male and 288 female  
teachers selected randomly from 81 municipal and 32  
private primary schools of Bombay. The tools consisted  
of a questionnaire and an interview schedule.  
Language, administration, sex, age and economic  
background were studied.

The major findings were:-

(i) More women were attracted to teaching profession  
as they felt that this occupation gave them more pres-  
tice than other occupations.

(ii) The proportion of unmarried women was more  
than that of married ones.

(iii) Women found that the job of teaching had fixed  
timings and there was less possibility of private  
relations developing with students.

(iv) Some of the reasons for not being favourable  
the profession were was less prestigious to work  
as a teacher in municipal schools, absence of  
opportunitites for promotions and they were frequent  
transfers.

(v) There were more male teachers in Marathi medium  
schools

(vi) More Gujarati teachers favoured the provident fund  
scheme.





Group - II

Volume III  
Abstract 574

**THE EFFECT OF PICTURES AND CONTEXTUAL CONDITIONS  
ON LEARNING RESPONSES TO PRINTED WORDS.**

(Author L.M. Shivanekar, Ph.D. Edu., Poona U., 1973)

The major objectives of the inquiry were :-

- (i) to find out the effect of pictures on learning new words,
- (ii) to find out the effect of the context on learning new words,
- (iii) to find out the combined effect of pictures and the context on learning new words,
- (iv) to find out the effect of contextual and pictorial clues on pupils of class I and II,
- (v) to find out the effect of contextual and pictorial clues in different scripts, and
- (vi) to study the sex differences with respect to the effects of contextual and pictorial clues. This study was restricted to children of Classes I and II and limited to the recognition of a few words.

The method consisted of the use of a 4x3x2 factorial design four treatments, three scripts and two classes. The four treatments were word-no picture (T1), word-picture (T2), sentence-no picture (T3) and sentence-picture (T4). The three scripts were English, Devanagari and Malayalam. Only four words were selected for experimentation. The sample included fifteen schools - five English medium five Marathi medium and five Malayalam medium. In each school, twenty children were selected at random from Class I and an equal number from class II. Thus, the sample for the experiment comprised 300 children of class I and 300 children of Class II. Analysis of variance was used for the analysis of data.

The major findings were:

- (i) Association of pictures with new words to be learnt had an adverse effect on learning them.
- (ii) Association of any context with new words to be learnt had an adverse effect on learning the words.
- (iii) Combination of pictures and contexts in association with new words to be learnt had an adverse effect on learning them.
- (iv) The contextual and pictorial clues had the same effect on the pupils of class I and Class II in learning new words.
- (v) The contextual and pictorial clues had the same effect in different scripts.
- (vi) The scripts selected for the experiment differed in their difficulty values.
- (vii) While teaching reading to beginners whether individually or in group, word alone method was found to be more efficient than the word-picture method in fixing new words and this held good for boys as well as for girls.

Group-III

Vol. III  
Abstract-7794.

A STUDY OF MATHEMATICAL CONCEPTS IN SYLLABUS  
AND TEXTBOOKS FOR STANDARDS II TO VII, ADARSHA :  
COMPREHENSIVE.

(Author- S.P. Karandikar, Pune, 1973)

The study was conducted with the following objectives.

(i) to examine whether the mathematical concepts mentioned in the syllabus for standards II to VII were in consonance with the intellectual maturity of the students,

(ii) to analyse the corresponding textbooks to ascertain whether the presentation of various concepts was appropriate to the students' intellectual maturity.

The study essentially involved a detailed analysis of the prescribed syllabi and textbooks. The investigators findings were supplemented by teachers' opinions obtained through a questionnaire. For analysing the prescribed syllabus, the investigator evolved a set of criteria based on the piagetian stages of cognitive development. The textbooks were analysed with respect to fifteen criteria representing three important characteristics of mathematical concepts. These data were then supplemented by the data obtained through the teacher's questionnaire which was administered to thirty mathematics teachers teaching at primary as well as secondary well.

Major findings and conclusions of the study were:-

(i) All mathematical concepts in the syllabi for Standard II to VII, except those of time and space were in consonance with the intellectual maturity of the pupils.

(ii) According to teachers, out of forty concepts

in the mathematics syllabus for standard II to VII, twenty were easy and twenty were difficult to teach.

(iii) It was found that teachers hardly read the syllabus they just followed the textbooks.

(iv) The presentation of concepts in the textbooks was logical rather than psychological.

(v) The presentation gave little scope for concrete experiences and self-efforts by pupils.

(vi) Teachers felt that textbooks gave them very little help in introducing new concepts by providing suitable learning experiences followed by adequate drill.

(vii) Teachers opined that textbooks were deficient in pictures, figures and examples conducive to the development of mathematical concepts.

(viii) In the syllabus, it was necessary to indicate the relationship between specific concepts and the objectives of teaching mathematics.

Group- III

Vol. III  
Abstract- 781

A CRITICAL EVALUATION OF HISTORY TEXTBOOKS FOR  
STANDARD VI

(Author- S.V. Kher, Dhule, 1972);

The study was conducted with the purpose of evaluating the textbooks used for teaching history to standard VI in Maharashtra state and providing suitable recommendations for its improvement. The specific objectives of the study were:-

(i) To analyse the textbook with a view to finding out how far it helped in achieving the objectives of teaching history as mentioned in the prescribed syllabus,

(ii) to find out whether the textbooks was suited to the level of understanding of the pupils of standard VI, ,

(iii) to examine whether the text material promoted fearless quest for knowledge among the pupils,

(iv) to ascertain whether the text material enable the pupils to apply relevant lessons of history to their lives.

The method of research used for the study was the survey method. The tools used were questionnaires for teachers, parents and subject experts and group interviews with teachers, parents experts and pupils. The sample selected for the study consisted of 150 teachers from 150 schools in Dhulia district, parents of forty pupils randomly selected from among those studying in standard VI in these schools, twenty five subject experts and all standard VI pupils of three of the 150 schools selected randomly. The response to questionnaires was not quite satisfactory. Only fifty five of the 150 teachers, eight out of the forty parents and sixteen of the twenty five experts responded, with whom group interviews were conducted. Interviews were held with all the standard VI pupils from the three selected schools.

Main findings and conclusions of the study were:

(i) the textbooks was helpful in creating among the pupils, awareness of their social heritage, developing patriotism and emotional integration but was not helpful in creating international understanding and for interpreting the present in the light of the past history.

(ii) All topics in the syllabus were appropriately represented in the textbooks.

(iii) There were several mistakes in the text several of which were factual; errors of omission also appeared.

(iv) The text material was easy to read and the biographical style of presentation, was suited to the age of pupils.

(v) The book was attractive and rich in visual aids as it contained a number of pictures, figures and maps.

(vi) There was need for greater variety in the exercises so that all objectives of history teaching received due weightage.

**SURVEY OF MINIMUM MUSCULAR FITNESS OF THE SCHOOL CHILDREN OF AGE GROUP 6 TO 11 YEARS AND COMPARISON OF THE INFLUENCE OF SELECTED YOGIC EXERCISES AND PHYSICAL EXERCISES ON THEM.**

(Author- A.M. MOORTHY, Ph.D., Edu., Poona, 1981)

The study aimed at examining four hypotheses namely (i) practice of selected yogic exercises improved the minimum muscular fitness, (ii) practice of physical exercises improved the minimum muscular fitness, (iii) as compared to the effects of physical exercises, yogic exercises brought better results, and (iv) during the detraining period, the result gained of training in yogic exercises is significantly retained as compared to the group which has training in physical exercises.

The sample included 1000 children (571 boys and 429 girls) from class II to class VII from the three Central Schools of Pune selected on a random basis. The tools used were Kraus-Weber tests. The treatments were yogic exercises and physical exercises. For the experiment, ninety boys and ninety girls were randomly selected from the failures on the basis of Kraus-Weber tests. Thirty boys and thirty girls were randomly assigned to control group, experimental group I (Physical exercises) and experimental group II (yogic exercises).

The major findings were:- (i) in the Kraus-Weber test, survey, failures among children were found to be 81.79 percent among boys was found at seven years of age while in girls, the maximum failure was 94.87 percent in six years age (iii) Both the experimental groups showed significant improvement after six weeks of training when compared to the control group (iv) Percentage improvement was seen much greater in yogic exercises group than in physical exercises group though statistically it was not significant. Among the girls this difference was statistically significant (v) The results of detraining effect in boys showed that experimental group I reduced improvement to the extent of 26.67 percent, whereas experimental group II reduced the improvement to the extent of 20 percent only. In experimental group II the residual effect was maintained more than that in the experimental group-I





Group-III

Vol.III

Abstract -791

A SURVEY OF PRIMARY TEACHERS' QUALIFICATIONS- THEIR  
OPINIONS REGARDING MATHEMATICS AND SCIENCE SYLLABI,

( Author- MSBTPCR, Pune, 1974)

Major aims of the study were:-

- (i) to collect data regarding qualifications, experience and training of mathematics and science teachers in primary schools,
- (ii) to find out the opinions of mathematics teachers regarding the new syllabus of mathematics for classes I to VII, and
- (iii) to find out the opinions of science teachers regarding the science syllabus for standards I to VII.

The sample consisted to schools selected from twentyfive districts of the state with thirty rural and twenty urban schools from each district. Two hundred and seventyfive schools were selected from greater Bombay. All the teachers from these schools who taught mathematics and sciences in classes V, VI, and VII were covered. Two questionnaires one for mathematics teachers and the second for science teachers were used to collect data.

The important findings were:-

- (i) Seven percent of teachers who taught mathematics were B.SC., six percent were B.A., seventy two percent had got their S.S.C. certificate, twelve percent had passed the primary school certificate examination and three percent were either F.Y.B.Sc. or F.Y.B.A.
- (ii). Amongst the mathematics teachers of classes V, VI, VII, eightseven percent were trained, seventy two percent had more than five years teaching experience, and forty seven percent had undergone an orientation courses in mathematics.
- (iii) Ten percent of the mathematics teachers felt that the modern mathematics portion of the syllabus was very difficult for pupils, sixtythree percent felt that it was somewhat difficult and twentyseven percent felt that it was easy.

(iv) Seventy four percent teachers thought that modern mathematics should not be kept optional but should be made compulsory.

(v) Some teachers felt that to do justice to the portion of modern mathematics, orientation courses of long duration should be organised for teachers, the mathematics periods should be increased and new teaching aids should be provided.

(vi) The qualifications of teachers teaching science to classes V, VI, VII, were B.Sc. Ten percent ; B.A., six percent, S.S.C. sixtynine percent primary school certificate., twelve percent and remaining either F.Y.B.Sc. or F.Y.B.A.

(vii) Seventy percent teachers complained that adequate equipments to demonstrate experiments were not available. Whereas twentyfour percent percent teachers stated that they gave opportunities to the pupils to perform experiments.

(viii) Seventyfive percent teachers were of the opinions that science should be taught as separate disciplines- physics, chemistry and biology.

(ix) Eightysix percent teachers were confident that they would be able to teach science as separate disciplines.

Group-III

Vol. III  
Abstract-792

STATEWIDE SURVEY OF USE OF TEXTBOOKS,

( Author- MSBTPCR, Pune, 1974 )

Major objectives of the survey were

- (i) to find out the percentage of pupils who had textbooks,
- (ii) to find out what percentage of them had secondhand textbooks,
- (iii) to find out differences between boys and girls, and between urban and rural pupils, regarding use of textbooks,
- (iv) to find out why some pupils did not have textbooks and
- (v) to find out the extent of use of non-textual materials produced by the bureau.

The sample consisted of thirty rural and twenty urban schools from each of the twenty five districts in Maharashtra excluding greater Bombay from where 275 schools were included. In all, 772,000 children were covered. The survey was limited to textbooks used in classes I to VII in Marathi medium schools. An information schedule was used as the tools for data collection.

The major findings were:-

- (i) The percentage of pupils who were present without their Marathi language textbooks was only 4.6 in class VII but it was 43.8 in class I.
- (ii) The percentage of pupils using secondhand mathematics textbooks varied from 32.1. in class II to 65.9 in class VII.
- (iii) When a new textbook was introduced, its sale dropped down for the first three years continuously. After which it went on increasingly slowly. This indicated that a textbook was usable for about three years.

(iv) The percentage of pupils in urban schools who were without books was higher than in rural schools about 4.6.

(v) As compared to boys, five percent more girls were found to be without books.

(vi) As compared to girls, three percent more boys used secondhand books.

(vii) Marathi copy books were used by only seventeen percent pupils.

(viii) Some pupils were without books either because the book was torn or the parents could not afford to buy or the book was not available or they shared the book with brothers and sisters.

Group. III

Vol. III  
Abstract-795

THE POSITION OF WOMEN IN SCHOOL TEXTBOOKS,

(Author- MSBTPCR, Poona-1976)

The important objectives of the present study were:-

- (i) to determine the extent of representation of women in the characters occurring in the textbooks, in fiction and mythology, in the authorship of lessons and in biography, and
- (ii) to analyse the nature of recreational activities, professional roles and character traits of males and females portrayed in the textbooks.

The study was confined to Marathi textbooks prescribed for standards I to X in Maharashtra state. The procedure adopted was to scan the textbooks, lesson-wise, and analyse the content regarding the nature of male and female representation. The analysis was done in respect of eight different aspects, namely characters depicted, pictorial illustrations, fiction and mythology, biography, authorship of lessons, recreational activities, professional roles and character traits of men and women portrayed in the lesson.

Major findings of the study were

- (i) In the ten textbooks taken together male characters were appearing three times more often than female characters.

- (ii) Out of a total of 1397 human figures in the illustrations only 325 were female figures.

- (iii) Out of the sixty six main characters occurring in fiction and mythology, forty nine were males and seventeen were females.

- (iv) Among the 392 authors who had written text matter in the ten textbooks the number of females was only forty two.

- (v) Out of sixty eight biographies sixty three

were of males and only five were of females.

(vi) the textbooks mentioned twenty four recreational activities of males and four of females, the recreational activities of males were quite common place.

(viii) Male characters portrayed in fiction and mythology were related to fifty different professional roles while females characters played only seventeen.

(Viii) The textbooks had a tendency towards stereotyping male as well as females characters in respect of their character traits.

(ix) Though there was a definite sexbias in the textbooks, it could have been unintentional.

(x) Stories in the textbooks were largely male-centred.

(xi) Males were depicted as intellectual and cultural while females were shown as inferior to males in these qualities.

(xii) While the textbooks provided a variety of male models the roles portrayed by females were narrow enough to inhibit the ambitions of girls and restrict them to stereo-typed homemaking roles.

Group-III

Vol.III -  
Abstract-814

CURRICULUM DEVELOPMENT IN SCIENCE RELEVANT TO THE  
INDIAN SCHOOL SYSTEM.

( Author- J. Ramdas., Ph.D., Poona U., 1981)

Objectives of the study were to:..

- (i) to formulate operational objectives to be achieved by Science teachers in the classroom,
- (ii) to implement these objectives and to evaluate their effectiveness in terms of changes in teacher and pupil behaviour, and
- (iii) to develop and test strategies for curriculum change which would be suitable for Indian conditions.

Two experiments were conducted under this study. One was carried out with "General Science" curriculum for standards I to VII in fifteen primary schools situated in a rural area near Khiroda in Jalgaon district in Maharashtra state. The other was carried out with "Physics" curriculum in standard IX in fifty selected secondary schools of the Bombay Municipal Corporation. The experiments were designed to demonstrate in the schools, and only with some training inputs to the teachers, science teaching could be improved. Experimental and control groups were used for the study. In both the experiments, the teachers were given orientation in objective-based teaching strategies and more participatory teaching styles. Handbooks were prepared for teacher's use. The experiment in the primary schools used a systematic observation sheet for observing classroom behaviour, and an interview schedule for the teachers. In addition attendance record and examination marks were used for evaluating the outcomes of the experiment. In the secondary school, written tests were prepared specially for the purpose.

The study led to some broad generalizations. The comparison of the control and experimental groups revealed that teachers showed some significant changes such as willingness to change their teaching methods and go beyond

the textual materials to include real life experiences and to encourage participation of pupils. An improvement in the pupil's ability to apply concepts in physics to non-textual situations, was also observed. There was no difference in the use of novel ideas of experimental group contributed more to discussions in the classroom. However, improvement of pupils in the skill of experimentation and other group activities was not significantly different in the two groups compared. Suggestions were made to pay more attention to the actual process of education in the classroom and bring about a conceptual change in its role, to study in the field actual effectiveness of the curricula, and to adapt the teaching methods and curricula to the changing needs of society.



Group-III

Vol. III

Abstract- 836

DEVELOPMENT OF CURRICULUM IN SCIENCE FOR  
SECONDARY SCHOOLS IN THE STATE OF MAHARASHTRA,

(Author- S.S. Uppal, Ph.D., Edu., Bom. U., 1977)

The objectives of the study was to develop a curriculum in science for standard VIII of the Secondary Schools in the State of Maharashtra. Data were collected by means of a questionnaire administered to science teachers and by conducting an experiment on pupils of standard VIII of English medium schools.

The main findings were:-

(i) The existing syllabus in force in the state needed modification,

(ii) The syllabus suggested by the investigator was found to be effective.



Group-III

Vol.III  
Abstract-837

A STUDY OF EXERCISES IN HISTORY TEXTBOOKS  
PRESCRIBED FOR STANDARD IV IN MAHARASHTRA STATE

(Author- S.G. Vaghamare, 1971, Aurangabad)

Major purpose of the study were:-

- (i) to examine the extent to which exercises provided in the textbooks measured the objectives of history teaching,
- (ii) to find out the weightage given to different types of exercises,
- (iii) to prepare a new set of exercises with the consideration to the different objectives of teaching history and (iv) to evaluate the suitability of the newly prepared set of exercises.

Exercises given in the textbook were analysed and classified according to the objectives of teaching history. The classification was done in terms of knowledge, understanding, application, skills and personal development. The exercises were then classified according to different item types, namely, objective type, short answer, activity oriented, essay type and dramatization. Based on these analyses the actual weightages given to the five different objectives and to the five different item types were calculated. The actual weightages were compared with the desired weightages. Desired weightages were fixed based on the opinions collected from fourteen teachers teaching in two colleges of education located in Aurangabad. The new exercises were prepared mainly with a view to bringing the weightage given to the objectives and item types to the desired level. These exercises were first evaluated by a committee of experts. They were then field tested with 173 pupils which included eighty eight boys and eighty five girls studying in four primary schools in Aurangabad.

Major findings of the study were as follows:

(i) Exercises given in the history textbook for standard IV contained, ninety five items, thirty nine of which were related to knowledge objectives, fifty five to understanding objectives and one on the objective of personal development; there were no items related to the objectives of application and skill.

(ii) of the ninety five items, fourteen were objective type, sixty one short answer type, nineteen type and one item involved dramatization there was no activity oriented item..

(iii) Comparison of the actual and desired weightages reveled considerable discrepancy in respect of objective coverage as well as item types. Desired weightages for the objectives of knowledge, understanding, application, skill and personal development were forty percent, forty five percent, three percent, five percent, and seven percent, respectively, the actual weightage given were forty one percent for knowledge objectives, fifty eight percent for understanding objectives and one percent for personal development with no representation for application and skill objectives. Desired weightages for the five item types, in terms of percentages, were eighty five, forty five, ten, five and five respectively, but the corresponding actual weightages were fifteen, sixty four, twenty one and zero.

(iv) Of the ninety five items provided in the textbook twenty four were faulty; of the faulty items it was possible to improve seventeen while the remaining seven had to be discarded altogether.

(v) Final set of exercises consisted of 156 items, which included sixty eight newly developed items.

Group-III

Vol.III  
Abstract-840

A CRITICAL EVALUATION OF MATHEMATICS TEXTBOOKS  
FOR STANDARDS II, III, AND IV,

( Author- Y.N. Walavalkar, 1971)

Main purposes of the study were:

- (i) to find out errors, if any, in the mathematics textbooks prescribed for standards II, III, and IV and
- (ii) to examine the suitability of these textbooks for the level of understanding of the pupils.

The mathematics textbooks prescribed for standards II, III and IV in Maharashtra state were carefully read and the contents analysed in detail. Based on the analysis, different tools for data collection were constructed. Data were collected from sixty five schools which included schools located in urban as well as rural areas. The tools used were a questionnaire for teachers, a questionnaire for parents and a set of achievement tests for pupils of standards III and IV. Questionnaire data were collected from about fifty teachers for each of the three standards. Parents' Questionnaire was administered to about fifty parents of pupils from each of the three standards. The achievement tests were administered to 324 pupils of standard III of whom 203 were rural and 121 were urban and to 300 pupils of standard IV of whom 188 were rural and 112 were urban. These data were augmented with data obtained through personal discussions held with the concerned teachers in the various schools.

Major findings and conclusions of the study were:

(i) The textbooks were, in general, suited to the capacity of the pupils.

(ii) The text material was related to the day-to-day life of the pupils.

(iii) The text material was appropriate for creating pupils' interest in mathematics.

(iv) There were a number of minor faults in the textbooks which needed to be rectified.

(v) There was a need to resequence some of the topics in the textbooks for standard II and standard III.

(vi) It was appropriate to include the topic vulgar fractions in standard IV instead of standard III.

~~(vii) It was necessary to provide an answer key for all exercises given in the textbooks.~~

Group-III

Vol-III  
Abstract-844

A COMPARATIVE STUDY OF THE MARATHI BALBHARATI  
( STANDARD I) VOCABULARY AND THE VOCABULARY OF  
PRE-SCHOOL CHILDREN,

( Author- V.V. Atre, Amravati, 1976)

The study purported to make a comparative analysis of the vocabulary possessed by children before they entered primary school and the vocabulary in Marathi Balbharati prescribed for standard I. The specific objectives of the study were

- (i) to find out the number of words in the Marathi Balbharati for standard I which were known to four or five years old children before they entered school,
- (ii) to find out the difference between pre-school vocabularies of rural and urban children, and
- (iii) to compare the vocabularies of children who attended pre-primary classes and of those who did not.

The study was carried out in Amravati and four villages in Amravati taluka. Sample for the study consisted of 100 teachers and 100 students. Of these 100 teachers, seventy belonged to urban schools and the remaining belonged to rural schools. Of the 100 preschool children selected for the study fifty were urban and fifty rural. Of the fifty urban children, twenty five attended pre-primary classes. The investigator first prepared a comprehensive list of all words appearing in balbharati for standard I and classified them under ten categories meaningful to children. This list was then given to the sample of teachers who judged each word as known or unknown to a child entering standard I. Words which were considered as known by ninety percent or more teachers were deemed to be part of the pre-school vocabulary. Similarly, words which were considered as unknown by ninety percent or more teachers were considered to be outside the pre-school vocabulary. The remaining words were considered to be of doubtful status. There were forty two such words.

A Questionnaire was prepared using these words and was administered to the selected sample of children in order to further ascertain whether they were within the pre-school vocabulary.

Major findings of the study were as follows:-

(i) Vocabulary of the Marathi Balbharati for standard I consisted of 843 different words.

(ii) of these 843 words, 687 words formed a part of the pre-school vocabulary where as the remaining 156 words were of doubtful status.

(iii) In relation to Balbharati vocabulary, the pre-school vocabulary of rural children was smaller than that of urban children.

(iv) from the Balbharati vocabulary, some words known to urban children were unknown to rural children and vice-versa.

(v) Some words in the Marathi Balbharati for Standard I appeared to have a regional status.

(vi) There was no difference between the pre-school vocabulary of children who were attending pre-primary classes and that of children who were not.

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Group-III

Vol. III  
Abstract-863

A STUDY OF ERRORS IN WRITTEN ENGLISH AMONG  
PUPILS OF STANDARD V TO VII.

( Author- V.G. Joshi- Society College of Education,  
Ahmednagar, 1975)

Main objectives of the study were:-

- (i) to find out the typical errors committed by pupils in written English,
- (ii) to diagnose the causes of these typical errors, and
- (iii) to formulate remedial measures for preventing the typical errors.

The study was confined to pupils studying in Marathi medium schools in Ahmednagar district. The written work scrutinized was limited to answer scripts of the annual examination. The sample of schools selected included both girls and boys schools. Answer scripts of pupils of standard V, VI and VII in these schools were selected through random sampling procedure. The answer scripts were closely scrutinized and the errors were listed under twelve different categories. Frequency of errors under each category was calculated. Probable causes of errors were arrived at through discussions with the concerned teachers in respective schools.

Major findings of the study were as follows:-

- (1) Errors concerning speech, number and spelling were committed by ninety percent, forty percent and forty five percent pupils, respectively.

(ii) Errors of conjunction and case were committed by two percent and six percent pupils, respectively.

(iii) The three categories of errors having the highest frequency were spelling, tense and number.

(iv) Out of the four types into which the error category spelling was divided, errors of omission and replacement were the most frequent.

(v) Among the errors of tense, almost all were caused by irregular verbs.

(vi) As the errors regarding number gradually decreased as the pupils progressed from standard V to standard VII.

(vii) Among the errors related to use of preposition, eighty six percent were caused by use of wrong preposition while the remaining fourteen percent were due to non-use of preposition.

Group-III

Vol.III  
Abstract-864

A STUDY OF NON- LANGUAGE TEXTBOOKS FOR STANDARDS  
I to IV FROM THE LANGUAGE POINT OF VIEW

( Author- V.S. Joshi., Ambajogai, 1971)

The study was conducted with the following objectives.

- (i) To find out whether the vocabulary used in the non-language textbooks was suitable,
- (ii) to ascertain whether the language used was within the understanding capacity of the children
- (iii) to find out if the language used was correct, precise and appropriate to the content.

All textbooks in mathematics, science, history and geography prescribed for standards II to IV came under the purview of the study. In all, nine textbooks were analysed. The study was limited to textbooks written in Marathi language.

Tools were used in the study included a questionnaire for teachers, one for parents and an interview schedule for educationists. Sample for the study consisted of fifty teachers twenty parents and ten educationists who were experts in primary education. After the detailed content analysis of all the nine textbooks included in the study the data were collected. Findings of the study were arrived at by collecting evidences obtained through content analysis and responses to questionnaires and interview.

Main findings which were applicable to all the textbooks evaluated were as follows:

- (1) There are parity between the vocabulary

of the various non- language textbooks and that the corresponding language textbooks prescribed.

(ii) The style of writing was simple and easy, lengthy sentences were normally absent. Thus the language used was understandable to the students.

(iii) Language used was precise and appropriate for the content included in the respective textbook

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Group-III

Vol. III  
Abstract-866

A STUDY OF BASIC VOCABULARY OF STUDENTS STUDYING  
IN STANDARD VII

(Author -G.N. Kathardkar, Ph.D. Edu., Poona U., 1982)

Major objectives of the study were:-

(i) to find out the and recommend basic recognition and reproduction vocabularies of pupils reading in class VII in Marathi medium schools in Kalyan and Thane region whose mother tongue was Marathi.

(ii) to classify the recognition vocabulary and the reproduction vocabulary according to the frequency of the word,

(iii) to provide the etymology of each word

(iv) to determine the range of words and to classify words accordingly,

(v) to provide the part of speech of each word.

(vi) to compare the written reproduction vocabulary with the oral reproduction vocabulary, and

(vii) to compare the recognition vocabulary with the reproduction vocabulary.

The sample consisted of 300 students from twenty five schools of Kalyan and Thane. The sources of data were the textbooks for class VII prescribed by the Maharashtra Government and magazines read by children. Tests for recognition vocabulary were developed by the investigator. For reproduction vocabulary, pupils were asked to write compositions on selected subjects like biography, autobiography, an informal letter on an event, a function or an imaginative idea.

The study resulted in preparing the recognition and reproduction vocabulary of the students. It was found that:-

(i) Pupils learnt about fortyeight percent of words from the language book.

(ii) Results of recognition and reproduction vocabulary revealed that as frequency increased, the number of words in that particular frequency decreased.

(iii) Etymology of words in recognition vocabulary indicated that words from Sanskrit were the larger in number (6870 out of 8852). There were only a few words from dialects (0.36 percent).

(iv) About 15.64 percent of the words were from magazines.

(v) Comparison of oral running words in oral reproduction had a percentage of 4.12. Only but the basic words in oral reproduction had comparatively a larger percentage (25.48).

(vi) Pupils used a large number of adjectives;

(vii) of the recognition words, more than 50 percent were not in the reproduction list.

(viii) of the total reproduction words, 36.25 percent words did not appear in the recognition list.

Group. III

Vol. III

Abstract-867

THE BASIC VOCABULARY OF FIFTH STANDARD STUDENTS  
OF MARATHI MEDIUM.

( Author- S.A. Katre-. Ph.D. Edu, Poona U., 1979)

Objectives of the investigation were to prepare the word list of recognition vocabulary and reproduction vocabulary in Marathi language of pupils studying in class V of Marathi medium schools, and to prepare the list of compound words. The work was confined to the schools in the Pune city.

This was a survey of study where the data were collected through analysis of relevant documents. Sources of data collection for recognition vocabulary textbooks for all subjects approved for class V and magazines usually read by class V children. Sources of data collection for reproduction vocabulary were essays written by pupils, answer books of pupils on different subjects, and record of group discussions by pupils. A pilot study was conducted to find out the magazines read by a majority of pupils on the basis of teacher's opinions. Certain articles were selected from three magazines. The sample comprised 500 pupils from twenty three primary schools of Pune. The schools were selected keeping in mind their quality, location, management, etc.

The major findings were:-

(i) Total number of different words from textbooks and magazines was 6570 whereas the total number of running words was 1,02,870.

(ii) Out of 6570 words, 2477 words had a frequency of one only, 1856 had a frequency of 2 to 4, 612 words had a frequency of 5 to 7, 661 words had a frequency of 8 to 10, whereas 964 words were at different points in the frequency range of 11 to above 100. The highest number of words were in the frequency of one.

one and lowest(eight) in the frequency range of 91 to 100.

(iii) only 99 words were found in all the six textbooks whereas 3606 words were found in only one textbook, were 1014 words in magazines only whereas 1799 words only in textbooks were 5556.

(iv) of the 6570 words, 4265 were nouns, thirteen pronouns, 1123 adjectives, 726 verbs, 339 adverbs, twenty two prepositions, thirty six conjunctions and forty six interjections. Nouns adjectives and verbs covered 93 percent words.

(v) Out of 6570 words 4600 could be recognized by 80 percent of students in a sample of 100.

(vi) Number of words recognised were 182 by formal testing and 4600 by informal testing. Total number of words recognised were 4782 which is about 72.6 percent.

(vii) Total number of running words were 9025 for oral vocabulary and 255135 words for written vocabulary, the corresponding figures for different words in reproduction vocabulary had a frequency of one whereas twenty words had a frequency in the range of 91 to 100.

(ix) of the 4900 words in the reproduction(written vocabulary 3280 were nouns, 794 adjectives, 546 verbs, 22 adverbs, eighteen interjections, thirteen pronouns, nine prepositions and eight conjunctions.

(x) 93-6 percent(4609) words in reproduction vocabulary was found to be the exact reproduction vocabulary of the students.



Group-III

Vol. III

Abstract- 874

A CRITICAL STUDY OF THE BASIC VOCABULARY IN  
MARATHI ( BOTH RECOGNITION AND REPRODUCTION )  
OF PUPILS HAVING MARATHI AS THEIR MOTHER TONGUE  
READING IN STANDARD VII IN MARATHI MEDIUM SCHOOLS  
IN MAHARASHTRA

( Author- S. C. Latkar, Ph. D., Edu, Poona U., 1979 )

The major objectives of the investigation  
were :-

(i) to find out the basic recognition and reproduction  
vocabulary of pupils reading in standard vii with Marathi  
as the mother tongue and studying in Marathi medium  
schools,

(ii) to provide etymology of each word

(iii) to determine the range of words and to classify  
them

(iv) to provide the part of speech of each word, and

(v) to compare the written reproduction and oral  
recognition vocabulary.

The sample comprised 575 students of class VII  
from twentythree schools of Pune selected on the basis  
of management, boys/girls/coeducational and distributed  
in all the words of pune. To prepare the word list  
for recognition vocabulary, the sources were prescribed  
textbooks for standard VII, supplementary reading material  
meant for standard VII pupils and the monthly magazines  
'Kishore' and other children's magazines in Marathi.  
Actually, seventyfive articles were selected from three  
magazines. The list of recognition vocabulary was  
prepared on the basis of word count from these sources,  
combining all derivatives under the umbrella of the  
parent words and preparing the frequency of the use of  
these words. The recognition vocabulary provided the base  
for preparing the reproduction vocabulary. In order  
to investigate the written reproduction vocabulary,  
two tests were prepared and administered to pupils-  
a composition test and a test based on the syllabuses  
of science, history, civics and geography.

The tests were administered to 575 students, from twentythree schools. The analysis of answer scripts yielded a list of 6782 different words and 304660 running words.

The major findings were:-

(i) Pupils were found to learn 47.63 percent words in the language textbook. The proportion of words learnt in other subjects was low.

(ii) As frequency increased, the number of words in that frequency decreased.

(iii) Etymology of words in recognition vocabulary showed that words from Sanskrit were the largest in number. About one percent of the words were from dialects.

(iv) The words which pupils learnt from one textbook was largest (3999). Repetitions of the same words in different textbooks were not balanced. About 15.10 percent of words were found in magazines only.

(v) Comparison of oral reproduction and written reproduction vocabulary showed that the running words in oral reproduction had a percentage of 4.05 only but the basic words in oral reproduction had a comparatively good percentage (26.12).

(vi) Of the reproduction words, more than 50 percent were not in the reproduction list.

Group- III

Vol. III  
Abstract- 887

A CRITICAL EVALUATION OF MARATHI(MOTHER TONGUE)  
TEXTBOOKS FOR STANDARD V,

( author- V.S. Pingre, Govt. College of Education,  
Aurangabad, 1972).

Main objectives of the study were:-

(i) to analyse the Marathi(mother tongue) textbook with a view to finding out whether it helped in achieving the objectives of language teaching mentioned in the syllabus, and (ii) to find out if the objective of language teaching mentioned in the syllabus needed to be revised.

The study involved carrying out an opinion survey regarding the existing syllabus and textbooks in Marathi for standard V in Maharashtra. The survey was conducted to collect the opinions of teachers, parents and experts. The data was mainly collected through three different questionnaires; additional data were collected through personal interviews with teachers and experts. Sample for the questionnaire study consisted of fifty six teachers, sixteen parents and ten experts. Additional evidences were collected by interviewing five teachers and an equal number of experts.

Main conclusions of the study were as follows:

(i) In general, the textbook was helpful in achieving the objectives of teaching mother tongue. However, it had some drawbacks, viz., lack of lessons helpful for developing patriotism and inclusion of a few lessons based on blind faith.

(ii) There was no proper gradation in the introduction of new words.

(iii) Different literary forms given due weightage except for letter writing which was almost completely neglected.

(iv) Among the exercises provided in the textbooks, there were too many easy type questions and too few objective type questions. In formulating the exercises, sufficient attention had not been given to backward children.

(v) In general, the illustrations were attractive and useful.

(vi) Physical features of the textbooks such as the type, binding and paper were satisfactory.

AN INVESTIGATION INTO THE PROBLEM OF WASTAGE AND STAGNATION  
AT THE PRIMARY LEVEL OF EDUCATION IN THE DISTRICT OF  
SIBSAGAR, D. PHIL. EDU., GAU. U., 1970.

( Author - PAS, R. C. )

The study is an investigation into the problem of wastage and stagnation at the primary level of education in the district of Sibsagar, Assam. The main objectives of this study were: (i) to ascertain the extent of the problem in the district and its variations under a variety of situations; (ii) to identify the causes and their relative importance; and (iii) to suggest appropriate remedial measures.

The basic approach in this study is to consider the children who could not complete the primary level of education in five years (primary stage in Assam consists of five grades) and to locate reason or reasons for educational wastage. The investigator selected representative areas of the Sibsagar district and included all the primary level institutions in the selected areas of the district for field survey. About seventyeight percent of the schools responded. The fresh students in 1963 were followed for five years for the calculation of wastage and stagnation. The number of pupils who dropped out and who were detained were calculated both classwise and sex-wise and expressed as percentage of the total strength of the pupils. The causes of wastage and stagnation were indirectly determined by asking the teachers and some inspecting officers and teacher educators by checking the appropriate causes from a list of all plausible causes. A proforma and information sheet for stagnation index and an opinionnaire were used to collect all information and for calculating stagnation index and to ascertain the relative importance of causes of wastage and stagnation. The causes were ranked after testing the significance of concordance coefficients among the three judges. The variations in the extent of the problem were studied in respect of a number of variables such as location, type of schools, number of teachers, type of management, training, qualification, age, experience, sex of teachers, physical facilities in schools, economic conditions, caste composition of the people in the society etc.

It was found that the incidence of wastage and stagnation was 76.27 percent - 14.24 percent wastage and 62.03 percent stagnation - in the district. The incidence of wastage and stagnation was found to be higher in the southern region than in the northern region of the district. The rate of wastage and stagnation for the rural areas was 77.91 percent while that for the urban areas was 63.22 percent and the difference was statistically significant. In classwise break-up, highest incidence was 34.48 percent in class A (lowest class) and lowest was 6.24 percent in class I, followed closely by 6.73

percent in class III. The stagnation indices in scheduled tribe community area were 86.54 percent (boys) and 89.74 percent (girls), whereas in non-scheduled tribe areas they were 74.0 percent (boys) and 75.18 percent (girls).

It was also found that poverty and economic backwardness claimed first rank among forty causes that were found to be responsible for wastage at the primary stage. Backward society and non-stimulating social environment, illiterate parents and guardian and untrained teachers claimed the 5th rank, 14th rank and 32nd rank, respectively. In general, socio-economic causes were more responsible for wastage and educational causes were more responsible for stagnation.

STAGNATION IN ELEMENTARY EDUCATION, SLE(ORISSA),  
BHUBANESHWAR, 1972.

( Author - PANIGRAHI, D., DASS, S.C. and DAS, K.C. )

This study was taken up (i) to find out the causes of stagnation at the elementary stage in Orissa and (ii) to suggest remedial measures.

Five educational districts in Orissa, viz., Bhanjanagar, Phulbani, Balasore, Angul and Bargarh, representing five linguistic zones of the state, were selected for collection of data. The students detained by headmasters in classes I and II at the end of the 1969-70 session were taken as failures. The students who were promoted were also screened with a view to finding out cases which, in fact, should have been detained for lack of desired standard. In all, 280 students of class II and 276 students of class III were tested. In order to screen the students, tests were prepared on the basis of the objectives of the syllabi for classes I and II. The curricula of classes I and II consisted of four subjects, viz., mother tongue, arithmetic, general science, and social studies. It laid more emphasis on mother tongue and arithmetic. All the forms of Pathan Pariksha (the reading test), Likhan Pariksha (writing test) and Ganita Pariksha (test of arithmetic) were used to test the students. In order to draw a dividing line between students who were below par and those who could make up the deficiency in higher classes, the 'passable limit' was also computed. The scores of each student in all the reading tests for a particular class were added and the total was compared with the total of the general limits (passable limits) of these tests and the position of the student was determined accordingly. Similar procedure was followed in the case of writing tests also. For arithmetic there was only one test for each class, and the individual scores were compared with the general limit. Information regarding personal and environmental factors was also collected through questionnaires.

The findings were as follows, (i) Students' pass percentages in all subjects in classes II and III were 15.7 and 13.4, respectively, whereas the percentages of students promoted to these classes by the Headmasters were sixtyfive and seventysix, respectively. (ii) The causes of the low or underachievement of pupils were traced from the data. The method of 'comparison of opposites' was adopted for this purpose. The 'high group' comprised those who passed in all the subjects and the 'low group' consisted of those who failed in all the subjects. It was found that most of the 'high group' students were regular in attendance, whereas most of the low group students were irregular. (iii) A subjectwise analysis of results revealed

that, in general, students' performance was better at the end of class II than at the end of class I. (iv) The performance of students who had to repeat grades due to previous failure was analysed; from amongst 280 students tested in class II and 276 tested in class III, there were 103 of class II and 130 students of class III detained in previous years. Out of the 103, sixtytwo failed in all subjects, ~~thirtytwo~~ passed only in one, twelve passed in two, and seven passed in all subjects. Out of the 130, sixtyseven failed in all the subjects, twenty-nine passed in one, twenty-six in two and eight passed in all the subjects. This indicated that there was little improvement in the performance of fifty percent students inspite of spending one more year in the same grade. (v) Most of the pupils in 'low group' did not have books and other instructional materials and their mother tongue was different from the regional language. These causes were coupled with economic backwardness,



GROUP II

VOLUME II  
ABSTRACT-223

LOW SOCIO-ECONOMIC STATUS AND PROGRESSIVE  
RETARDATION IN COGNITIVE SKILLS - A TEST  
OF CUMULATIVE DEFICIT HYPOTHESIS, POST-GRADUATE  
DEPT. OF PSY., UTKAL U., 1974. (UGC FINANCED)

(Author: K. Jackuck and . A.K. Mohanty)

The study aimed at finding out the effect of low SES belongingness upon nonverbal reasoning and verbal ability as two forms of basic cognitive skills. It was hypothesized that the rate of intellectual and language development of the socially disadvantaged class would progressively decline with age.

The sample consisted of 100 boys out of which, fifty were between 8-10 years, and the rest were between 14-16 years. Within each age group equal numbers of subjects were chosen from high SES and low SES families. The boys were selected from three different schools of Bhubaneswar. The Raven's Standard Progressive Matrices and the Stroop Test were administered. The statistical techniques used in the analysis of results included analysis of variance and t test.

The findings of the study were as follows: The high SES subjects from rich educated families had better performance than the low SES subjects from poor uneducated families in both the tests. At the higher age the low SES group was found to have faster word reading speed than the high SES group. Significant interaction of age and SES was obtained. The high SES groups had faster colour naming speed than the low SES groups at both the age levels. Disadvantaged lower class children did not compensate for their handicap when they came out of the limited home environment and grew in a wider urban structure and school environment. The cognitive growth of disadvantaged children was at a slower rate than that of the advantaged, and hence, the disadvantaged children showed a cumulative deficit in cognitive skills as they grew older.



COGNITIVE GROWTH AND CLASSROOM  
LEARNING OF THE PRIMARY SCHOOL CHILDREN  
IN CRISSA - A CROSS CULTURAL ANALYSIS,  
DEPT. OF PSY., UTKAL U., 1972.  
(NCERT FINANCED)

(Author: R. Rath)

Intellectual and cognitive manifestations of 330 brahmin, scheduled caste and scheduled tribe children studying in five different primary schools of Crissa were compared.

All the samples were administered the following tests: (i) The Raven's Progressive Matrices to measure intelligence; (ii) the Kattars' Aspiration Test to measure a particular kind of level of aspiration and achievement; (iii) the Auditory Vigilance Test to measure attentional processes involved in signal detection and vigilance; (iv) the Stroop's Colour Word Interference Test to obtain an index of linguistic development; and (v) Verbal Concept Formation Tests to assess the range and quality of concepts based on the class IV language book. Marks secured by the children in the various school examinations in all the subjects of study were noted to assess their academic achievements. By interviewing all the children and their parents, the motivational and aspirational problems of the subjects and their parents were investigated. The family and parental educational attainment of all the members of the family. Attendance and stagnation of the subjects under investigation were also found out from the school records. The estimation of the teachers about the abilities, behaviour and future academic possibilities of the subjects was also attempted. The average time taken to administer all the tests on a single child and to interview him for filling up the questionnaire was 5.5 hours.

It was found that the brahmin children were younger by 9-10 months and were the most intelligent, closely followed by the scheduled tribe children. The tribal children were very ambitious and vigilant. The brahmin children were consistently better in verbal abilities and concept formation.



GROUP II

VOLUME II  
ABSTRACT-249

AN INVESTIGATION INTO THE PROBLEM OF  
INDIVIDUAL DIFFERENCE INTO THE ACADEMIC  
PROGRESS OF PRIMARY SCHOOL CHILDREN OF  
JORHAT AREA IN THE DISTRICT OF SIBSAGAR,  
I.H.D. EDU., GAU. U., 1978.

(Author: H.N. Sarma)

The major objectives of the study were: (i) to observe the range of individual differences in abilities reflected in the academic progress of children during the course of primary education; (ii) to observe whether children maintain their individual differences in ability levels of achievement from grade to grade in the course of their academic progress; (iii) to observe the trend of achievement and variability of individual cases; (iv) to observe the impact of sex difference, environmental variations, teaching by trained and untrained teachers, school conditions and teaching facilities, multiple class teaching individual attention by teachers and age variations on the problem.

The sample consisted of 300 children selected by stratified, proportionate, random manner. The data about the schools and the locality were collected through visits to schools. The data about parents' income, occupation, etc., were also collected. The chronological ages of children of Jorhat Town area were collected by consulting the horoscopes. Means, mean deviations, percentages of achievement test scores of pupils in each grade were found out. The significance of mean differences was found out by applying the t test. Coefficient of relative variability was also computed to find out the range of variability of different groups from one grade to another.

The major findings were: (i) the children at the primary stage did not maintain their academic progress according to the individual differences in abilities of achievement consistently from grade to grade.

(ii) The progress of high achievers was significantly inconsistent. A trend of declining achievement and increasing variability was observed. (iii) The average achievers too showed a trend of decline in achievement and increase of variability, but less when compared to high achievers, (iv) The low achievers showed a unique trend of improvement in subsequent grades and variability like high achievers. (v) The variability in earlier grades of all the three groups tended to decline in subsequent years and at the end of the course. (vi) Sex differences, environmental variations and other variables, except individual attention by teachers, did not have significant and tangible effect on achievement of primary children.

GROUP II

VOLUME II  
ABSTRACT -398

A STUDY OF BASIC VOCABULARY (BENGALI),  
PH.D. EDU., GAU. U., 1978.

(Author: T. Dasgupta)

The major objectives of the study were: (i) to construct a glossary of basic vocabulary for classes I, II, III and IV; (ii) to construct a glossary of all words of basic vocabulary of classes I, II, III and IV containing the difficulty value in respect of the students of class IV only to ascertain whether more than one year of exposure has any significant impact on the vocabulary performance of the pupils; (iii) to identify the best, worst and medium scores on the vocabulary test batteries; and (iv) to compare the performance of Class IV students of Shillong and that of two districts of West Bengal to ascertain whether the glossary has wider applicability.

Students were drawn from the schools of Greater Shillong, Jalpaiguri district and Coochbihar district. The mode of drawing the sample, though on random basis, differed at different stages of the study. Also, forty parents/guardians and fifteen teachers were involved in obtaining the data for the study. Eight batteries of vocabulary test, one rating scale, one schedule and one verbal fluency test were prepared and employed for collecting the desired data. For computing the estimated vocabulary for classes I, II, III and IV, four textbooks from each class were chosen and analysed in terms of vocabulary, and different words for each class were tabulated alphabetically in four progressive glossaries.

The major findings were: (i) In all 26.96 percent of the total 1209 words in the four glossaries formed the basic vocabulary of class I, 33.01 percent of class II, 16.04 percent of class III and 23.57 percent of class IV. (ii) The rate of increase of words was quite significant, from class I to II being 29.28 percent and from Class III to class IV being 43.22 percent. But there was a rate of decrease of words from class II to class III, that being 50.13 percent.

(iii) Out of the total number of 1209 words, 32.01 percent were the words of medium difficulty value, 59.64 percent were with low difficulty value and 8.33 per cent words were with high difficulty value.

(iv) It was found that the glossaries had applicability beyond the territorial limits of the original sample.



GROUP II

VOLUME II  
ABSTRACT-437

DEVELOPMENT OF AN EVALUATION FORM AND  
EVALUATING EFFECTIVENESS OF THE EXPERIMENTAL  
TEXTBOOK "SCIENCE IS DOING" FOR CLASS III  
PREPARED BY NCERT, IN THE CRISSA SCHOOLS,  
1975. (UNICEF FINANCED)

(Author: SIE (Crissa))

The objective of the project was to evaluate the effectiveness of the experimental text book, "Science is doing" for class III prepared by the NCERT in the Schools of Crissa.

The sample consisted of fifty primary schools and the teachers who taught the textbook "Science is doing", besides the supervisors. Questionnaire was used to have the opinions of the respondents on different aspects of the book. The questionnaire contained two parts: one part dealt with the physical aspects of the book, e.g., size, binding, paper, printing, type (size of the letters), colours used and the get up of the book while the other part included the aspects like suitability of content, arrangement of the chapters, experiments, illustrations, pedagogical principles implicit in the presentation, evaluative questions given at the end of each chapter, suggested homework, effect of the textbook on the blind faith and superstition of the children and on their attitudes, suitability of language used and finally the time required to teach the book.

The major findings of the study were as follows: All physical aspects of the textbook were judged to be good except the get up. The teachers suggested to eliminate some portions of the textbook as they were not suitable for the pupils of the age group 7+. A change in order of arrangement of the chapters was demanded by as many as thirtytwo teachers out of fortyseven. Some of the experiments were considered difficult for the class. In some experiments the pupils failed to reach the desired conclusions. More illustrations were required to be given in the book. However, the pictures given were all useful. The teachers demanded four periods, each of forty minutes. a week to teach the book. The extra classroom work under the caption, "Things to do at home" was found to be disatisfactory by the teachers.

SR



Group-II

Vol. III  
Abstract-404

A PSYCHOLOGICAL STUDY OF PERSONALITY PATTERNS  
OF RISK-AND NON-RISK TAKERS OF KUMAON REGION

(Author- P.N. Arora., Ph.D. Psy., Kum.U., 1981)

The objectives of the study were (i) to trace the personality patterns of the risk and non risk takers (ii) to find out the relation of risk taking tendency with the extent of self-disclosure of the individual (iii) to find out the effect of social and economic status of the individual having risk-taking behaviour, (iv) to know whether there is significant age differences with regard to the extent of risk-taking tendency and (v) to trace the effect of willingness/unwillingness in job selection on risk attitude.

A sample of 1000 subjects were selected by the random cluster sampling technique. After the data were collected from the entire sample on the criterion of Q technique the sample was categorized into two groups i.e. risk-takers (RT) and non-risk takers (NRT) on the basis of the age groups and professions. The data were collected on the Self-Disclosure Inventory, Risk taker Questionnaire and the Hindi version of the 16 PF questionnaire. Critical ratio test, analysis of variance, biserial coefficient of correlation and kilmogorov-smirnov extension of median test were used to analyse the data.

The main findings of the study were: (i) There were significant differences in the global personality patterns of risk takers and non-risk takers. (ii) Extroversion was positively related with the risk taking tendency of the individual (iii) Abstract and insightful thinking were inversely proportionate to the risk-taking behaviour. (iv) Risk-takers possessed a dominating personality in society. (v) Non-risk takers were more serious, introvert and prudent. (vi) Positive relationship between risk-taking tendency and super-ego strength was identified (vii) Shyness was negatively correlated with risk-taking (viii) Tender-mindedness was positively and highly correlated with the risk-taking tendency. (ix) the risk takers seemed to be suspicious by nature (x) Practicability in life was directly proportionate to the risk taking behaviour (xi) Shrewdness in the behaviour and risk taking tendency were positively

related.(xiii) The inter-relationship between placidity/apprehensiveness and risk taking showed that the two were not correlated(xiii) the NRT personality was conservative.(xiv) The RT liked their own ways of activity management.(xv) The RT showed a strong control on emotions.(xvi) Mental tension and risktaking behaviour were found to be highly correlated.(xviii) The NRT were orthodox and stereotyped.(xviii) The target figurewise self-disclosures of the RT and the NRT differed significantly. The RT had higher self-disclosures comparatively.(xix) the Self-disclosure extents of the RT towards brother, sister and friends were significantly higher than those of NRT. (xx) Casteism did not play a significant role in risk-taking.(xxi) Socio-economic status did not lead to a difference in the level of risk-taking tendency.(xxii) There was no significant age variation in the risk-taking tendency.(xxiii) the correlation between willingness/unwillingness in risk job-selection and the level of risk taking tendency was significant.

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EFFECTS OF MALNOURISHMENT ON SELF CONCEPT,  
PERSONAL-SOCIAL ADJUSTMENT AND COGNITIVE  
COMPETENCE AMONG LOW INCOME GROUP SCHOOL  
CHILDREN

(Author - Dutta, T., Ph.D.Psy., Utkal U., 1979)

The study aimed at investigating the effects of malnourishment on self concept, personal social adjustment and cognitive competence of boys coming from low income families.

Boys numbering 360 and reading in Classes IV and V of 100 schools scattered in Cuttack, Puri and Balasore districts served as subjects. Each subgroup had sixty subjects. The children were divided into six subgroups on the basis of their height, caste and area of residence. The Way I Feel about Myself scale (Piers-Harris) was used to measure the self concept of children. Teachers' Rating Schedule (White and Watts) and Parental Expectancy (Dyer) were used to measure the personal-social adjustment of children. The tests used to measure their cognitive competence were Cross Modal Coding (Birch and Belmont), Visual STM (Howarth and Browne), Auditory STM, Coloured Progressive Matrices, Colour-Word Test (Stroop), Word Definition Test and Matching Familiar Figure Test (Kagan). The results were analysed by using the F-test and regression analysis.

The findings were:

- (i) The parents of brahmin children were found to be significantly taller than those of Harijan children.
- (ii) The brahmin children were significantly younger than the Harijan children.
- (iii) The brahmin children had significantly higher self-concept, personal-social adjustment and parental expectancy scores than the Harijan children.

- (iv) The brahmin children were also found to be significantly superior to the Harijan children with regard to the performances on school achievement, Cross Model Coding, Visual STM, Auditory STM (serial Recall) and Word Reading Time.
- (v) Malnourishment adversely affected the scores on self-concept and parental expectancy.
- (vi) The less malnourished(tall) Harijan children were found to be better than severely malnourished (short) Harijan children, no matter whether they came from the rural or the urban background.
- (vii) The tall harijan children had significantly higher scores on auditory STM(free recall) and discrimination learning tasks.
- (viii) The urban Harijan children were found to be superior to the rural harijan children in linguistic competence as reflected by the scores on Word Definition Test.
- (ix) The number of children in the family was fairly good predictor of performance in Cross Model Coding and Word Definition Test of severely malnourished rural Harijan children and of Auditory Short Term Memory for severely malnourished rural Brahmin children.
- (x) Parental expectancy scores influenced, to a considerable extent, the competency in Word Definition (abstract) of less malnourished rural Harijan children and in Word Definition (descriptive) of severely malnourished brahmin children.

LEVEL I - LEVEL II ABILITIES OF SOCIALLY  
DISADVANTAGED CHILDREN: EFFECTS OF AGE,  
SEX AND CASTE

(Author - Jachuck, K., Ph.D.Psy. Utkal U., 1978)

The investigation was planned with the following purposes:

- (i) to compare the cognitive structure of socially disadvantaged and advantaged children taken from different SES and caste groups, particularly with regard to Jensen's Level I and Level II abilities, and
- (ii) to find out if growth of Level I and Level II abilities among these sub-cultural groups followed the prediction of Jensen's theory.

The hypotheses formulated were:

- (i) There would be no significant difference among the four sub-cultural groups, namely, the high SES brahmin, the low SES brahmin, the high SES harijan and the low SES harijan in their performance on Level I tests.
- (ii) The socially disadvantaged children will perform significantly better than the socially advantaged children in regard to Level II tests.
- (iii) The magnitude of correlation coefficient between tasks corresponding to Level I and Level II abilities will be greater for high SES brahmins than the corresponding correlations for the low SES harijans.
- (iv) The difference between socially disadvantaged and advantaged children in regard to Level II ability will be greater in the higher age group than in the lower age group.

Data were collected from a sample of 500 subjects consisting of brahmin and harijan children (of low and high SES) of two age levels, six to seven years (class II) and eight to nine years (class IV). A battery of tests measuring Level I (Digit Span Forward, Free Recall, and Serial Recall)

and Level II (Coloured Progressive Matrices, Figure Copying, Digit Span Backward and Clustering) were administered to all the children. Data were analysed in a 2x2x2 (socio-economic status, caste and age) analysis of variance design. Simple effects and specific interactions were tested by Scheffe method of multiple comparison and t-tests.

The study revealed: (i) Differences favouring socially disadvantaged groups were apparent on tasks measuring Level II abilities, namely matrices, figure copying, clustering, and digit span (backward). (ii) As predicted by Jensen for most of the Level I tasks, except serial recall, socio-economic status and caste effects were not significant.

(iii) The results showed a cumulative deficit of the socially disadvantaged children in all of the tests of Level II abilities. These results were interpreted as evidence for the hypothesised differential growth curves for Level I and Level II abilities. (iv) Jensen's predicted relationships between Level I and Level II tests for advantaged and disadvantaged groups were not found.



Group-I

Vol.III  
Abstract-756

INTRODUCTION OF WORK EDUCATION IN PRIMARY SCHOOLS-  
A PILOT STUDY;

(Author- Dash S.C., Orrisa)

Major aim of the study was to develop models of curriculum in work education for primary classes. The specific objectives were (i) to identify the situations related to work education(ii) to develop necessary instructional materials, and (iii) to develop tools to evaluates outcomes of activities related to work education.

The sample consisted of ten schools. In five schools, cane work was introduced and palm leaf work ,as introduced in the second set of five schools. Facilities which would support work education were surveyed.

A Questionnaire was developed to collect information regarding village, school, enrolment and other relevant factors. An interview schedule also was developed.

Major outcomes of the pilot sutyd were(i) The Curriculum of work education could be conveniently divided into three groups as for classes I and II, Classes III and V, and classes VI and VII.(ii) it was found difficult to clarify the skills and processes to be acquired by students of each class and combination of different classes. (iii) A curriculum on work education and instructional materials were developed, tried out and found satisfactory.(v) Curriculum for work education should be based on local resources and worksituations available.



Group.I

Vol.III  
Abstract-757

A CRITICAL STUDY OF THE METHODS OF TEACHING  
IN THE SECONDARY SCHOOLS OF NAGALAND

(Author- Dev- S.K. Ph.D. Edn,Gau. U., 1979)

The main objectives were (i) to study methods of teaching school mathematics in Nagaland, and (ii) to evolve an effective instructional programme in mathematics especially for schools of Nagaland.

An attempt was made to evaluate classroom teaching in mathematics. Keeping in view the principles of teaching mathematics, twenty one classroom teaching activities were conceptualised. After analysing the opinions of ten experts regarding the efficiency of these activities, they were employed in measuring classroom teaching effectiveness. Data were collected through structured interview, questionnaire, observation, inventory and tests. The pupil Attitude Inventory, Mathematics Teaching Competence Scale, headmasters' rating scale for teacher behaviour and Minnesota Teacher Attitude Inventory were employed to collect data. For measuring effectiveness of existing mathematics syllabi and for investigating learning facilities and departmental supervision pupil's Maturity Test and Arithmetic and Teaching Learning Facility Schedule were used. The study was based on the observation of a stratified random sample of twenty schools (eight urban and twelve rural) selected from three districts of Nagaland, viz. Kohima, Mokokchung and Tuensang. In all forty nine teachers and 1877 pupils from class III to VI were included in the final sample. The study revealed that (i) Teachers were more interested in lecture method. They had a negative attitude towards reflective type questioning. (ii) A large number of teachers could not maintain logical succession of steps and forty percent of the teachers could neither do sums correctly nor explain through correct and economic procedures. (iii) Teachers were poor in questioning skill mainly because they were weak in subject matter. (iv) The percentage of teachers having positive attitude towards making the lesson objective was highest while lowest towards ensuring assimilation. (v) About eighty two percent teachers did not ensure whether the concept was understood by the students or not.

- (vi) In all sixty five percent teachers did not strive to evoke non-coercive participation from students.
- (vii) About sixty one percent teachers could not effectively guide pupils' ideas towards objectives of the lesson.
- (viii) About sixtyone percent teachers followed what had been said in text-books.
- (ix) Majority of the teachers did not have creative ability.
- (x) The intercorrelations of teaching behaviours were quite substantial.
- (xi) The factorial study of teaching behaviour revealed that the teaching behaviour for pre-learning activities had a high impact on in-learning activities had a high impact on in-learning process. In all three learning modules, viz. pre, in and post, were identified.
- (xii) The teaching behaviour appeared to have a functional relationship with teaching experience.
- (xiii) Teachers who took college courses in mathematics (pre-degree or degree) seemed to be more efficient in teaching mathematics than matriculate and under-graduate teachers.
- (xiv) Teaching successs partly depended on teachers personal feelings towards the profession.
- (xv) The existing mathematics syllabi was unscientific.
- (xvi) The mathematics textbooks were defective.
- (xvii) The teaching- learning facilities were inadequate in a majority of the schools.
- (xviii) The teacher behaviour and achievement of the pupils were inter-related.

PSYCHOLINGUISTIC COMPETENCE AND LANGUAGE  
ACHIEVEMENT OF THE SOCIALLY DISADVANTAGED  
AT PRIMARY SCHOOL LEVEL,

(Author- S., Samu, Ph.D. Psy., Uttarakal U., 1977)

The investigation aimed at assessing the efforts of social disadvantage on language abilities and a few psycholinguistic processes.

The investigation was based on a 2x3 factorial design, with two levels of social dimensions (socially advantaged vs. socially disadvantaged) and three levels of grade dimensions (grades II, III and V). There were thirty five subjects in each of six resulting sub-groups. Language abilities investigated in the present project included measures for reading, spelling of words, comprehension of words, comprehension of passages and word fluency. Measures of psycholinguistic abilities included verbal intelligence, perceptual and semantic mediational abilities and three-stage mediational abilities.

Results showed that

(i) In general, advantaged subjects did not significantly better than their disadvantaged counterparts on measures of language achievement.

(ii) As regards verbal intelligence and semantic mediational abilities also, advantaged subjects did generally better.

(iii) So far as perceptual mediational abilities are concerned, advantaged group in grade II and III did better than their disadvantaged counterparts, but the trend was reversed for students of grade VI.

(iv) On the measure of three-stage mediational ability, both advantaged and disadvantaged subjects showed facilitation over three stages of paired associate learning.

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GROUP -II

VOLUME -I  
ABSTRACT -520

CONSTRUCTION OF STANDARDISATION OF AN ACHIEVEMENT TEST  
IN EVERYDAY SCIENCE FOR CLASS VIII STUDENTS OF THE PUNJAB  
AND TO CONSTRUCT A SCALE TO ASSESS THE ATTITUDE OF THE  
STUDENTS TOWARDS LEARNING OF SCIENCE PH.D. EDU., PN.U.  
1968

(RUP PRAKASH)

The objective was to construct and standardise an achievement test in everyday science for class VIII in the Punjab and also to construct a scale to assess the attitude of students towards learning science.

The test comprised four variables, namely,

- (i) acquisition of knowledge of scientific principles facts and terms;
- (ii) application of principles and knowledge of science in everyday life situations;
- (iii) ability to classify materials and substances; and
- (iv) skill in observation and critical thinking. The difficulty and discriminative values of each item were found out. A separate manual of instructions for examiners for the administration and scoring of the test and separate answer sheets for recording the answers were prepared. The norms were based on the sample of 1,380 examinees. The scores made by the whole group and the various subgroups (urban, rural, boys', girls', government and non-government schools) approximately were normally distributed. The reliability coefficient by K.R. Formula 2C was .85. The validity coefficient of the test was .44. The percentage norms and the z scores for the whole group and various subgroups were computed. The attitude scale was constructed using Thurstone's technique of equal appearing intervals. The final scale consisted of twentyfour items uniformly distributed. The entire scale was a nine point scale from extremely favourable to extremely unfavourable. The statements were arranged in the descending order of their scale values. The arithmetical mean of the scale values of the statements endorsed by an individual was the scale of the individual.

The split-half reliability coefficient of the scale was .80. The scale was administered to a sample of 1,120 students who had already taken the achievement test in everyday science.

The major findings were -

- (i) achievement in science and pupils' attitude towards learning of science were positively related;
- (ii) the pupils in urban areas scored more in science than those in rural areas;
- (iii) science achievement of pupils from government schools; and
- (iv) the girls scored higher than the boys in science.





GROUP II

VOLUME II  
ABSTRACT-220

A STUDY OF THE RELATIONSHIP OF CREATIVITY  
WITH SELF CONCEPT AMONG THE SCHOOL GOING  
CHILDREN OF 12 + IN JAMMU CITY, PH.D. EDU.,  
PAN.U., 1977.

(Author: A.K. Gupta)

The main objective of the study was to find out the relationship between creativity and self-concept among the school going children of the age group twelve plus in Jammu city.

The sample consisted of 1000 boys and girls. To measure creativity, a verbal and non-verbal battery of MIER test of creativity which was constructed and standardized by the investigator was used. For estimating real self concept and ideal self concept, the Dec's Personality Word List in Hindi was used. The statistical techniques used were mean, median, standard deviation, skewness, kurtosis, significance of the difference between group means, correlation and factor analysis.

The main conclusions of the investigation were as follows: (i) There was an empirical evidence on the theoretical frame work given by self-theorists like Allport, Rogers and Maslow. (ii) The results highlighted the importance of having higher and healthier self concept and higher self-acceptance as important personality characteristics conducive to higher creativity whether verbal or nonverbal. (iii) Highly creative individuals were found to possess higher self concepts and high self-acceptance both of which were conducive to better adjustment and positive mental health. (iv) The intimate relationship between creativity and self concept indicated by contrasted group analysis could not be substantiated by high correlation between the two variables, possibly because of scatter caused by the middle fortysix percent group. (v) The existence of two independent dimensions of creativity, verbal and nonverbal, was verified. (vi) Creativity and self concept were found to be closely related dimensions, yet presence of a common factor between the two was not borne out by the results.

SR



GROUP II

VOLUME II

ABSTRACT-443

AN INVESTIGATION INTO THE BASIC  
PANJABI VOCABULARY OF FIFTH CLASS  
STUDENTS (10+) IN THE STATE OF PANJAB,  
PH.D. ELU., PAN.U., 1974.

( Author: H.S. Soch)

The study aimed at investigating into the basic Panjabi vocabulary of the fifth class students (10+) in the state of Panjab. The main objective was to prepare a glossary for fifth graders comprising general words of common usage distinct from specific or technical terminology.

The sample consisted of 2000 fifth grade children selected from twelve districts of Panjab on the basis of multistaged randomisation of clusters. In all 1229 words were collected from various sources wherever the child communicated. Five alternatives were provided to each word as its meaning. These words were divided into seventeen checklists and were administered on the sample selected. Data were analysed by finding out difficulty level of words, standard error of proportion, and difficulty level corrected for chance.

The study revealed the following: (i) The values of corrected proportions ranged from 0.03 to 0.90. (ii) The split of words by difficulty level were 16 between 0.01 and 0.10, 190 between 0.11 and 0.20, 406 between 0.21 and 0.30, 344 between 0.31 and 0.40, 150 between 0.41 and 0.50, 91 between 0.51 and 0.60, 27 between 0.61 and 0.70, 5 in difficulty range of 0.71 and above.



Group-II

Vol.III

Abstract-15

A STUDY OF VALUES AND IDEALS OF EARLY  
ADOLESCENTS LIVING IN DIFFERENT TYPES OF  
HOME ENVIRONMENT,

( Author- A.K. Kalie, Pat. Un.1981)

The major hypotheses of the study were:

(i) early adolescents living with both the parents differ in their values and ideals from those early adolescents living with one of their parents and from those living in orphan homes, (ii) the values and ideals of early adolescent living in one parent homes are different from those living in orphan homes, (iii) there are significant differences in the value and ideals of early adolescents in relation to their sex, and (iv) it is possible to identify certain common values and ideals prevailing among early adolescents living in both parent homes, one parent homes, and orphan homes.

The sample comprised 562 early adolescents in the age group twelve to fourteen plus. From both parents homes 195 were selected (ninety five boys, 100 girls) 186 from one parents homes ninety four boys and ninety four girls), and 181 from orphan homes (ninety seven boys eighty four girls). The tools used for collecting data were a adjustment Inventory (Mittal) study of Values and a scale to assess the ideals developed by the investigator. For analysing the data descriptive statistics t-test, Duncan's multiple range test, and factor analysis were used.

The major findings of the study were:- (i) the both parent male adolescents scored significantly higher on theoretical and political values than those from orphan homes, who excelled in aesthetic and religious values. The former were higher in physical educational, political, and economic ideals and the latter scored higher on family and sports ideals (ii) The both parents males were similar in their theoretical, economic, aesthetic, political, and religious value preferences, whereas social values were found higher in the case of both parents subjects. (iii) Both parent early adolescent males scored higher on physical, educational political, and economic ideals.

ideals, whereas, orphans scored higher on family and sports ideals. (iv) The one parent male subjects scored significantly higher on the cretical and political values and excelled in physical political and economic ideals, whereas, those from orphangees gave high rating to social and religious values and sports ideals.

(v) No significant difference was found between the both parent and the one parent females in values in political values in which the former scored significantly higher. In the case of ideals the former group was found higher on physical educational and political ideals and the latter group on family and sports ideals.

(vi) the both parent female respondents were found significantly higher on the cretical and religious values than those from orphangees who scored higher and on aesthetic and social values. (vii) No

significant differences were found in values of female respondents from orphan homes and from one parent homes except on the cretical values, in which the former group lagged behind. The parent female subjects scored higher on educational and religious ideals, and the other group on family and economic ideals. (viii) All the three groups show significant differences on the basis of sex and adjustment.

Group-II

Volume-III  
Abstract-434

THE CHILD'S CONCEPTION OF MOVEMENT - AN  
EMPIRICAL STUDY

(Author - Chand, K., Ph.D. Edu., Pan. U., 1980)

The major hypotheses of the study were:

- (i) Development of the concept of movement in children was a function of age.
- (ii) Development of the concept of movement in children depended on their level of intelligence.
- (iii) The social class of the family affected the development of the concept of movement.
- (iv) Sex differences existed in relation to the development of the concept of movement.

The sample consisted of 240 boys and 240 girls spread equally (twenty boys and twenty girls) over the twelve age groups of one year interval from the age range of 4+ through 15+, and belonged to fifteen schools in Chandigarh and its suburbs. The concept of movement was studied through five Piagetian tasks, namely, - alternative directions of travel, order of succession inherent in cyclic movements, the path traversed, composition of displacements, and relative movements. Locally devised apparatus for the Piagetian Tasks, Raven's Standard Progressive Matrices, and Socio-Economic Status Scale by Kuppaswamy were used. The age of the child was taken from school records. The statistical techniques used were t-ratio, product moment correlation, scalogram analysis, and two-way analysis of variance. The hypotheses advanced in the study were first tested taskwise and then for the concept of movement.

The major findings were:

- (i) The sample, in general, responded poorly to the task relative movements. The subjects did not respond at the level of hypothetico-deductive understanding of the concept of movement even up to the age of 16.

- (ii) Quality of performance on all the five tasks separately and on the total score of those five tasks continued to improve across the entire age range.
- (iii) The findings lent empirical support to the first hypothesis that the development of the concept of movement in children was a function of age. The ~~intra-age~~ group differences in the task development, however, were significant only at the age levels 5+ and 7+.
- (iv) The hypothesis that development of the concept of movement in children dependend on their level of intelligence was also not rejected, empirically both on the basis of correlations and the analysis of variance. The results were significant at all age levels ~~except~~ at 6+ and 14+.
- (vi) The sex of the children did not make any significant difference in relation to the concept of movement except around the age of 8 to 9 and 13 to 14.



Group-II

Vol.III  
Abstract- 503PSYCHOMOTOR PERFORMANCES AND VIGILANCE IN CHILDREN  
AS A FUNCTION OF AGE, SEX, and MOTIVATION

( Author- MEENAKUMARI, Pan.U., 1981)

The major hypotheses of the study were (i) Psychomotor performance and vigilance would improve with age, (ii) Girls were superior in vigilance to boys (iii) Verbally induced motivation was expected to have a facilitating effect on psychomotor performance and vigilance (iv) Extroversion in children was expected to be positively related with psychomotor performance and vigilance (v) Neuroticism was expected to have a positive relationship with psychomotor performance and vigilance due to its nature as an automatic drive (vi) Intelligence would have a positive relationship with psychomotor performance and vigilance.

The sample of the study comprised 240 students (120 boys and 120 girls), between the age range 10 and 14 years, selected randomly from the schools of Chandigarh and Amritsar. The students were selected on the basis of their performance on JPI, CPM, and S.P.M. It was an experimental study, based on a three-way factorial design, involving three levels of age (10, 12, 14 years), two levels of motivation (high and low), and two levels of sex. The tools used in the study were Junior Personality Inventory (JPI) of Mohan, Raven's coloured Progressive Matrices (CPM), Raven's Standard progressive Matrices (SPM), Psychomotor Performance Tests on two tasks- Backward Figure Writing (BFW), and Backward Alphabet Writing (BAW) and Visual Task involving signal detection developed by Mohan and Malhotra.

The major findings of the study were (i) Age emerged as a significant determiner of psychomotor performance and vigilance. (ii) On Pre-test BFW, sex was not found to be a significant determiner of performance, but on post-test BFW, sex emerged as a significant and vigilance (ii) On pre-test BFW, sex was not found to be a significant determiner of performance, but on post test, BFW sex emerged as a significant determiner, with means clearly favouring the girls. On BAW, boys, performance was found to be significantly better, both at pretest and post-test levels. Sex was found to be a significant determiner of vigilance in pretest condition only, though means favoured girls in both the conditions (iii) The high motivation group performed better on both the psychomotor tasks and also on vigilance task, except in the case of the posttest BFW, where the low motivation group performed significantly higher.

(iv) The two factor interactions of sex and motivation for pre-rest BFW, of sex and age for post-rest BAW of age and motivation for pre-rest and post-rest vigilance and the three factor interaction of age, sex, and motivation for post rest were found to be significant (v) Extraversion and intelligence were found to be positively correlated, and neuroticism was negatively correlated with psychomotor performances and vigilance. (vi) Correlations between extraversion and intelligences, and neuroticism and intelligence were not significant establishing the independence of these dimensions. (vii) Girls were found to have higher mean scores on extraversion and neuroticism, while boys scored higher on intelligence though none of the differences were significant. (viii) On extraversion the twelve year age group scored the highest, followed by the fourteen year and the ten year age group on neuroticism, too, the twelve year age group scored the highest but it was followed by the ten year and the fourteen year age groups. On intelligence the fourteen year age group scored the highest, followed by the ten year and the twelve year age groups.

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Group-I

Vol. III  
Abstract-746

A COMPARATIVE STUDY OF THE EFFECTS OF MODERN AND TRADITIONAL MATHEMATICS CURRICULA ON PIAGETIAN CONCRETE AND FORMAL LOGICAL THINKING.

(Author- V. Bala, Ph.D. Education., Pan.U.1980)

Major hypotheses of the study were

(i) modern mathematics curriculum facilitated piagetian concrete logical thinking in a great or degree than the traditional curriculum at the primary school level,

(ii) Pupils of lower secondary school exposed to modern mathematics curriculum performed significantly better on piagetian formal operational tasks than pupils studying traditional mathematics,

(iii) Boys and girls of modern mathematics group of grade IV performed significantly better than those of the traditional group on piagetian concrete operational tasks and,

(iv) Boys and girls of modern mathematics group of grade VII showed significantly better performance on piagetian formal operational tasks than those of the traditional group.

The study was designed as a single factor experiment. A mixed sample (boys and girls) of fiftyeight students of grade IV, and sixty of grade VII, selected from a school in Anhalala (Haryana) was taken. The sample was randomly divided into two treatment groups and those were separately exposed to the two curricula by the same teacher, for a period of sixteen weeks. The two groups of both the grades were found to be alike on means and standard deviations on Cattell's Culture Fair Intelligence Test. Means and standard deviation's of ages of the two groups, of each of the two grades, were also almost equal. Experimental controls and controls of variables were exercised. Both the groups of both the grades were post tested on piagetian concrete and formal operational tasks and scoring was done according to the stages given by the piaget himself.

Major findings of the study were:-

(1) Modern mathematics facilitated piagetian cognitive thinking ability to a greater degree than the traditional mathematics, at the primary school level.

(ii) On Piagetian formal operational tasks both the groups(modern and traditional) of grade VII were found to be nearly equal.

(iii) Boys and girls of the 'modern' group of grade IV, performed significantly better than those of the 'traditional' group on several of the piagetian concrete logical measures.

(iv) Boys and girls of both the groups(modern and traditional) fared almost equally well on piagetian formal operational tasks.

(v) Results indicated acceleration of concrete logical thinking through modern mathematics.

(vi) Acceleration of cognitive abilities could be declared only with some reservation, as scholars studies have pointed out temporary gain in these which might not be permanent.

AGGRESSION, FEAR AND ANXIETY IN CHILDREN -(THEIR  
EDUCATIONAL IMPLICATIONS), Ph.D. EDU., RAJ. U., 1963.

(Author - JULKA, G.L. )

The main aim of the present investigation was to study the nature of children's fear, aggression and anxiety with the help of a specially constructed test suited to Indian conditions, and to find out the causal factors involved in them. The subsidiary aims were to compare two culturally different groups, the Bhil and the non-Bhil, and the two sexes with regard to their fear, aggression, and anxiety responses on the new test; to study the personality traits of highly aggressive, fearful and anxious children through the Rorschach Ink Blot Test; to search out new ways of controlling abnormal manifestations of aggression, fear, and anxiety in young children; and to recommend an educational programme which may be helpful to teachers and parents in dealing with the problems of aggression, fear and anxiety in young children.

One hundred school going children of the age group 7+ to 11+ were included in the sample. Equal number of children were taken from the two sexes and the two different cultural groups known as the Bhil and the non-Bhil groups. The first group, that is the Bhil group belonged to a backward primitive tribe-a tribe which resides in the remote rural and hilly areas of Udaipur District. The children in this group had a very poor socio-economic background. Their parents were mostly labourers and farmers who were working on daily wages or on a lease basis in the fields of Rajput landlords. The family income of these children in no case exceeded rupees one hundred per month. The second group, that is, the non-Bhil group belonged to the Hindu community. All the children in this group were living in the city of Udaipur. Their socio-economic condition was high. Their parents were officials in government offices or they held respectable positions in society. The monthly income of the parents of these children was more than five hundred rupees. A new test of fear, aggression and anxiety was constructed by the investigator. The new test comprised twenty pictures representing various situations of child's physical and social environments. The test was developed mainly on the lines of the Murray's Thematic Apperception Test. An attempt was made in the present study to establish

the validity of the new test by correlating the test results with the opinion of the teachers regarding children's behaviour. The results were, however, not very encouraging. Case studies of a few selected individuals in the two cultural groups were carried out in detail. In all, twelve children were selected for the purpose.

The research revealed the following. Fear themes occurred more frequently in the records of children than the other themes. This was true in the case of all children-Bhils and non-Bhils, males and females. Next in order of frequency were the themes of aggression and anxiety. The other themes were produced less frequently than the three themes mentioned above. The most common forms of fear expressed by the children, in order of their frequency, were fear of animals such as fear of being killed by tigers, lions, snakes or other wild animals; fear relating to school such as fear of punishment or scolding by the teacher for not doing home work or getting late in the class; fear of persons or supernatural beings such as ghosts, giants, witches, strangers, thieves, dacoits, the police, abductors and kidnappers; fears relating to family situations, such as fear of being scolded or punished by the parents or other family members and fear of illness or occurrence of death in the family; fears of inanimate objects and places, such as jungles, darkness, water, flood and high places. The most common forms of aggressive responses given by children, in order of frequency, were: aggressive ideas, aggressive assaults, aggressive murder and verbal forms of aggression such as rebuking, scolding, complaining, etc. In the group of environmental themes, themes of aggressive punishment by family members, teachers and other persons; aggressive beating or attacking by animals, persons, and family members; and aggressive killing or murdering by animals and family members were among the commonest forms. Children's anxieties were mostly related to their school work. A few children had also expressed their worries relating to health of their own self or physical well-being of their family members. The non-Bhil children produced significantly more themes of aggression than the Bhil children. No significant differences were found between them with regard to their production of fear and anxiety themes. The female children produced significantly more themes of fear than the male children. There were no significant differences between the two sexes on the production of aggression and anxiety themes. The intercorrelations between fear, anxiety and aggression of themes showed either negative or low positive correlations which might indicate no common factor involved in them. Most of the aggression, fear and anxiety themes were drawn from geophysical and social environments. This

might indicate that the causal factors lie mostly in environmental situations rather than in any inherited factor. Bhil children produced more themes of fear of scolding or punishment by the teacher, fear of police, fear of jungle, of being attacked or killed by an animal and the fear of darkness, whereas non-Bhil children produced more themes of fear of strangers, fear of thieves, dacoits and robbers and the fear of abductors and kidnappers. Female children produced more themes of timidity, fear of scolding or punishment by the parents and the teachers and fear of darkness, whereas the male children produced more themes of fear of thieves, dacoits and robbers. Non-Bhil children produced more themes of verbal aggression, aggressive assaults, aggressive punishment, aggressive narrations and social aggression than the Bhil children. Female children produced more themes of verbal aggression and aggressive punishment by someone other than the hero and the male children produced the largest number of aggressive murder themes committed either by hero himself or by some-one else in the stories. The fears were found mostly learned or acquired. Most of the children who expressed the highest number of responses in their records were found to be shy and withdrawn children. Physical disability and general weakness was one of the underlying causes of fears in young children. Lack of confidence and feeling of insecurity in the subject himself was another cause. Anxiety was caused mostly by an awareness of disapproving and reflecting attitudes on the part of others, by conflicts between opposing needs, by nonconformity to prescribed standards, by disappointment or loss, by inferiority feelings and the repression of hostile impulses. The physical conditions arousing aggressiveness were poor health, lack of sufficient sleep, unsuitable sleeping conditions, disturbed sleep due to worry or anxiety, suffering from children's diseases, lack of sufficient vigorous activity or play during the daytime, illness and insufficient recreational facilities. Too high ambitions, inability to achieve goals and inability to meet failures were the other causes contributing to aggressiveness. Disturbed home conditions such as uncontrolled parents, quarrelsome or aggressive members of family, unhealthy relationships between children and parents, etc. were found to be suggestible to the child to learn more aggression.





GROUP -II

VOLUME -I  
ABSTRACT -195

ART AS A PROJECTIVE TECHNIQUE FOR DEVIANT CHILDREN,  
PH.D. EDU., RAJ. U. 1964.

(S. DHONDYAL )

The objectives of the study were -

- (i) to assess the potentiality of art as a projective technique;
- (ii) to bring to light the bearing that modern concepts of personality, normality and abnormality have on art;
- (iii) to examine the theory of child art in the light of contemporary views of cognitive, motor and emotional processes and to suggest modifications, if necessary;
- (iv) to formulate fundamental principles, of the interpretation of art on the basis of the modern theory of dynamic psychology;
- (v) to validate the technique of the interpretation evolved; and
- (vi) to evolve an objective and scientific technique of the interpretation of art.

The sample consisted of spontaneous drawings and paintings of deviant children between 7+ and 11+ and also of a class of fortyfour normal children of the same age group. The tools used were interviews, observations, clinical records of deviant children, tests and psychologists' reports.

The study revealed that :

- (i) the house was most prominent in the minds of the normal children and least prominent in the minds of the abnormal children;
- (ii) milieu affected the contents of the art products of all the children;
- (iii) boys drew mostly male figures, while girls drew female figures;
- (iv) with an increase in IQ there was more refinement and mastery of lines;

- (v) the mentally blocked could not scribble; even when they drew uneven loops, red was most used or preferred colour for them;
- (vi) the children of higher IQ used a variety of colours;
- (vii) there was no characteristic order of preference either of the mentally retarded or of the gifted children and emotional significance of a colour was relative;
- (viii) in evolving an interpretative form to score and interpret an art product, variables located were; identified figures, conception of the identified figures, world view, emotional climate, orientation to the environment as exhibited by the position of the identified figures, intelligence, integration of ego, manifest super ego, reaction to art, and symbolisation.

GROUP -II

VOLUME- I  
ABSTRACT -204

PSYCHOLOGICAL STUDY OF THE PROBLEM CHILD. PH.D. PSY.,  
JOD. U. 1969.

(K. MEHTA)

The purpose of the study was to investigate into the behavioural problems -emotional, social and scholastic- of problem children.

The sample consisted of 150 problem children of age group 5-12 years. The tools used were the Bhatia's Battery of Performance Test of Intelligence and the Saxena's Adjustment Inventory. Case histories of the children were also collected.

The findings were as follows:

- (i) the percentage of problem children increased along-with age , the highest being at 11-12 years; (24.79 for boys and 34.48 for girls);
- (ii) backwardness in bright children was observed in cases where the parents' attitude was either too harsh, dominant or indulgent:
  - (iii) lack of punctuality, evasion, carelessness and slackness of parents appeared to influence children, making them irregular, deceptive and dishonest in school work;
- (iv) the maximum percentage of problem children was from labour class while the lowest percentage was from agriculturists;
- (v) as such as seventeen percent of the problem children belonged to poor families with more than six children;
- (vi) there was negative correlation between the incidence of problem children in families and their socio-economic status;
- (vii) children from certain casts were comparatively more maladjusted;
- (viii) eightyeight percent boys and 20.6 percent girls had problems related to home surroundings while fortyfour percent boys and 6.6 percent girls had

problems related to outside home surroundings  
and

- (ix) conflict arose in the minds of the children having highly authoritarian parents who expected dependence and teachers who expected initiative and independence.

A STUDY OF INTELLIGENCE OF RAJASTHAN CHILDREN OF AGE GROUP 12-14 YEARS READING IN SCHOOL GRADES VII AND ABOVE, Ph.D. Psy., RAJ. U., 1958.

(Author - MEHTA, P. )

The present study was concerned with exploring some of the sociological aspects of intelligence and was confined to the Rajasthani children of age group from twelve to fourteen reading in school grades VII and above.

A verbal group test of intelligence was revised and restandardised as a part of the study. The original test constructed by the investigator in 1949. contained 100 items, arranged equally in eleven sub-groups. This test was administered to about 1800 school going boys of Jodhpur, in 1949. It had a time limit of twentyfive minutes. The original test of 100 items was subjected to item analysis. A sample of 140 pupils of age group from twelve to fourteen reading in school grades VII and above was drawn for this purpose from two high schools one in urban and another in a semiurban area. After item analysis, sixty items were retained. One group of the original test was altogether dropped. The final study was conducted on a random sample of children drawn from thirtytwo randomly selected schools. The total sample consisted of 330 girls and 1275 boys. Alongwith the test, a sociological questionnaire was also administered. The reliability coefficient for the test was calculated by the split-half method and by K-R formula. By the split-half method it was found to be 79. After employing the Spearman-Brown formula, the reliability coefficient was found to be 93, whereas K-R formula gave a reliability coefficient of 91. Empirical validity coefficient for test with school marks was found to be 44. The correlation of the subtest with the total scores indicated satisfactory internal consistency. The centroid method was used for the factor analysis of the test and three factors were extracted. The McNemar's formula was employed to test the significance of residuals. The 'g' saturation of the test was also found out by the Spearman's formula. The results showed sufficient 'g' saturation. The first factor identified was similar to Spearman's 'g' factor of intelligence. The other two factors were identified as similar to Vernon's V: ed. Thus the test was found to be a good measure of 'g' + V: ed. factors. The sociological data were tabulated mostly on the lines of Scottish Mental Survey of 1947.

The study showed that most of the children under study came from non-manual occupations. The mean family size showed no variations for occupational classes. Nearly half of the children under investigation belonged to families where there were more than one earning member. The differences in occupational class showed difference in occupancy rates, but they were not very well marked. It was more closely related to differences in size of family. Overcrowding existed in all occupational classes. It appeared from the data that children, irrespective of their father's occupation grew under certain similar social values. Children from the professional class showed superiority over children belonging to other five occupational classes. The difference was marked and highly significant. Children from the occupational classes of salaried-employees, business people and skilled workers obtained similar mean test scores. These children differed significantly in their scores from children belonging to the class of farmers and unskilled manual workers. The children from the class of unskilled manual workers showed the lowest mean test score. The mean test scores by family size for occupational classes showed no definite variations. The correlations between the two were not significant. The size of family and the number of earning members showed significant positive correlation. The mean test scores showed no definite variations for the earning members also. It was only when the number of earning members was held constant, that the negative effect of the size of family began to operate on the test scores. Then the two, i.e. the size of family and the test scores showed significant negative correlation. The mean test scores showed definite variations for the occupancy rates. The negative relationship between the two was evident. As the occupancy rate increased, the score tended to go down. This was so, for each occupational class, but not for the size of the family.

A STUDY OF CHILDREN'S VOCABULARY, Ph.D. EDU., RAJ. U., 1960.

( Author - RUKMANI, R.C. )

This study sought to survey children's Hindi vocabulary. The aims were: (i) to assess the vocabulary of children of age group seven plus reading in the second grade in the schools of Rajasthan on the basis of the results; (ii) to assess the vocabulary used in the nationalised textbooks of the second grade; (iii) to undertake a comparative study of (i) and (ii); (iv) to evolve criteria for vocabulary suitable to the children of age group seven plus reading in the second grade; and (v) to compare the range of vocabulary of boys and girls of age group seven plus.

The study was confined to the spoken vocabulary only. The sample consisted of twenty children of seven plus reading in the second grade and ten children of eight plus reading in the third grade from five different schools in and around Udaipur. Normative survey method and observational method were used for finding out the spoken vocabulary of the children. The spoken vocabulary of the children of eight plus was prepared so as to make out a list of words falling within the appreciation level of the children of seven plus. The spoken vocabulary was collected with the help of various stimuli in the form of pictures of homes, school and playground, story narration and consequent relevant conversation. Each child was observed for a total period of two hours which was divided into five intervals. The first interview was of fifteen minutes and was conducted to establish the rapport with the child. Words spoken by the child were taken down. The duration of the second, third, and the fourth interviews was thirty minutes each. Home-situation pictures and relevant conversation, school situation pictures and relevant conversation and play-situation pictures and relevant conversation were used as stimuli for the second, third and fourth interviews, respectively. The duration of the fifth interview was fifteen minutes and the child was required to narrate a story. The vocabulary was studied in all these interviews. Twenty lists of spoken vocabulary of children of seven plus and ten list of vocabulary of children of eight plus were prepared. A consolidated list of words of the former consisted of 1232

words analysed and arranged with reference to frequency. Four preference lists were prepared. The first list comprised sixtyfive words having seventyfive to hundred percent frequency, the second one contained 123 words having fifty to seventyfour percent frequency, whereas the third one contained 424 words having twentyfive to forty-nine percent frequency. The fourth list included 622 words having one to twentyfour percent frequency. Out of the 1232 words, 771 were nouns, 241 verbs, 112 adjectives, twentyfour pronouns and eightyfour other words. The vocabulary of children of eight plus was analysed. The total number of words given by these children was 1647. These words were arranged according to the frequency. The words which occurred in the list of seven plus were eliminated from this list. Thus the total number of words given exclusively by children of eight plus was found to be 430. Out of these, words having 1 percent frequency were deleted. Thus 208 words were upto the level of children's apperception and hence were considered suitable for inclusion in the second grade textbook. It was found from the analysis of the nationalised textbook for the second grade that there were 424 nouns, 149 verbs, 108 adjectives, twentyseven pronouns and 113 other words.

The important findings were as follows: (i) The total number of words in the consolidated list of the spoken vocabulary is 1232, whereas it is 821 in the nationalised textbook. The difference of words indicates that the collected vocabulary output of the children (different number of words known and used by them) is much more than the words included in the textbook. (ii) In spoken vocabulary and textbook vocabulary the nouns predominate, the percentage being 62.58 and 51.85, respectively. (iii) The textbook vocabulary was assessed in the light of the basic vocabulary and the apperception lists. The total number of words common to both the lists was 436 (52.85 percent of the textbook vocabulary and 35.40 percent of the basic vocabulary). (iv) Out of the other words included in the textbook, other than these, 124 words were known to the selected sample of children and eightyone words were of the apperception level of children of seven plus. The inclusion of the remaining words in the textbook cannot be justified. It is suggested that (i) the size of the textbook vocabulary may be increased; (ii) a higher percentage of words from children's spoken vocabulary well as that from the apperception list be included in the textbook; and (iii) the selection of words from the list of basic vocabulary should be done in order of preference.



DEVELOPMENT OF COOPERATIVE AND  
COMPETITIVE BEHAVIOUR AND ITS  
RELATIONSHIP WITH NEED FOR ACHIEVEMENT  
(n Ach), Ph.D. PSY., UDAI. U., 1974.

(Author D. Banerjee)

The present investigation intended to study the behavioural pattern of children in terms of achievement motivation and cooperative and competitive behaviour. The specific objectives were: (i) to study the development of cooperation and competition in pre-adolescent children; (ii) to study n Ach of pre-adolescent children and the relationship between n Ach and cooperative and competitive behaviour; (iii) to study the subcultural differences in cooperative and competitive behaviour and n Ach; and (iv) to study the relationship of cooperative and competitive behaviour as dependent variables with some independent variables like, personal background (age and sex), achievement motivation and some personality variables (dependency, classroom trust and adjustment).

Data were collected from 454 subjects from Delhi and Udaipur. Subjects were selected from classes IV, VI and VIII of different primary and secondary schools. The sample consisted of three subgroups of communities - Hindu, Bhras and Tribe. The research tools used were (i) the Maximizing Difference Game; (ii) the Mehta's TAT picture cards; (iii) the Preadolescent Adjustment Scale; (iv) the Preadolescent Dependency Scale (Form B); (v) the Preadolescent Classroom Trust Schedule; and (vi) the Kuppaswamy's SES Scale.

Findings of the study revealed that (i) competition was found to increase with age in every subgroup of communities; (ii) role of sex was found to be not significant in cooperative and competitive behaviour; (iii) effects of homogenous and heterogenous groups were not found significant in cooperative and competitive behaviour; (iv) Bhras were found to show least cooperative behaviour (high in competitive behaviour)

among all other communities, and Tribals showed the highest cooperative behaviour (lowest competition behaviour) in comparison to others; (v) the relationship between n Ach and competition was very low and not significant; (vi) Bohras were more independent than Tribal and Hindu students and all the three communities showed more or less the same degree of classroom trust; (vii) Hindus and Bohras showed similar trend in adjustment while Tribals were found to be less adjusted as compared to Hindus and Bohras; (viii) adjustment was found to be significantly and positively related with n Ach in Hindu and Tribal groups; and (ix) relationships between different personality dimensions and game behaviour were found to be low and insignificant for different communities.

REACTIONS TO FRUSTRATION AMONG ADOLESCENTS  
IN THE SCHOOL SITUATIONS, PH.D. EDU., RAJ. U.,  
1973.

(Author: C.M. Sharma)

The aim of the present study was to devise a separate Picture Frustration Test for adolescents using school situations on the basis of Rosenzweig's technique. The specific objectives of the study were: (i) to study the normal frustrating situations in the schools; (ii) to examine the reactions to frustration of the adolescents in the school situations; (iii) to study the developmental patterns of reactions to frustrations of the adolescents in the school situations; and (iv) to compare the categories of the new test with Parcek's and Madras PF Test together with the categories of both the sexes at different age levels.

School Situation Reaction to Frustration Test (SSRFT) was developed on the line of Rosenzweig's technique along with another teacher rating scale. Sentence completion method was adopted for the purpose of studying frustrating situations. In all 100 male and 100 female adolescents together with fifty teachers were selected by stratified random sampling. Twentyfour frustrating situations were selected for the construction of SSRFT. Concurrent validity, factorial validity and validity against teachers' ratings were attempted. The concurrent validity using the Muthaya's PF Test and the Indian Adaptation of the PF Test (Adult form) was found satisfactory. The scoring reliability ranged from 0.44 to 0.83 itemwise, whereas according to age level it varied from 0.57 to 0.76. The test-retest reliability ranged from 0.21 to 0.71 for different categories.

The major findings of the study were as follows:  
(i) The top ten frustrating situations for adolescents revealed in the study were - good players were not given good prizes, librarian refused to issue books, disturbance by classmates in the class, subject of

choice not given, secrets were listened to by others, headmaster/headmistress refused admission, indiscipline in the school, noise in the cinema or theatre, classmates abused, and invigilator's accusation for copying. (ii) The needs involved in the frustrating situations were found to be aggression, in-avoidance, order, achievement, harm-avoidance, and dependence. (iii) Through factor analysis it was found that Ego-defence, Need-persistence and Obstacle-dominance were the prominent factors related to types of aggression at all the stages of development. (iv) It was found that different types (factors) of aggression showed a tendency of fluctuation in respect of age both in boys and girls.

ART AS A PROJECTIVE TECHNIQUE FOR  
CHILDREN, PH.D. EDU., RAJ. U., 1964,

(Author: S.N. Dhondiyal)

The main purpose of the study was to develop and standardise a procedure of collection of spontaneous art of children by evolving objective techniques of scoring and interpreting art, establishing norms, and determining reliability and validity of the technique of interpretation involved.

The method employed was case study within the framework of an experiment. Sex, age, educational class and economic status were kept constant as far as possible. In addition, contrasted groups within experimental setting were studied. The tools used were Teacher's Rating Scale, Semi-projective Questionnaire (both designed for the purpose of the study), the CAT, the Rorschach Ink Blot Test, interview and intelligence tests like the Goodenough's Draw-a-Man Test, the Cattell's Culture Fair Intelligence Test, and the CIE Individual Scale of Intelligence. All these tools were used with fiftyone boys belonging to the age group of ten years and a half to eleven years and a half. Besides, case studies of eight boys were made in the process of the tryout collection of spontaneous art and of the development of a standard procedure for collection of the spontaneous art of children. The total number of spontaneous art productions of these subjects collected were 1,136. Only drawings and paintings were collected.

A technique of scoring art productions in terms of observables and measurables was evolved. Art productions of contrasted groups, from well adjusted to psychotics, provided a rich variety and characteristic differences which resulted into 194 scoring symbols. These were divided into nine categories, namely, content, element, human figure, other ego denoters, inner living, control over emotions and feelings, orientation, design, and unity. The technique

of interpretation evolved consisted of three major steps, namely, structural analysis, thematic analysis, and integration of the two analyses. The reliability of the technique evolved was calculated both at the scoring and at the interpretative levels. The repeat collection of art productions of ten cases indicated that the correlations between the scorings of these two collections ranged from 0.87 to 1.00 for different subcategories. Inter-scorer reliability was very high. For calculating reliability of interpretation of scores, the interpretative statements of the above mentioned ten cases were matched with the interpretations of the repeat collections. The matchings were hundred percent. Validity of the technique of interpretation evolved was examined by preparing classified tables of interpretative statements taken from the results of the different projective tests used in the study. The table showed that 78.4 per cent of art interpretations were matched. To interpret correctly the Rorschach responses of fiftyone subjects, the Rorschach norms for this age group in Indian conditions were established.

GROUP II

VOLUME II  
ABSTRACT-599

AN INVESTIGATION INTO THE QUALITY OF "UNIT PLANS" FOR TEACHING PREPARED BY A CENTRAL AGENCY AND ALSO THE DIFFICULTIES FACED BY TEACHERS IN THEIR USE, GOVT. TEACHERS' TRAINING COLLEGE, AJMER, RAJASTHAN, 1975.  
(NCERT FINANCED)

(Author: G.L. Bhargava, and V.D. Tripathy)

The objectives of the study were: (i) to judge the quality of the unit plans produced by different agencies, and (ii) to find out the difficulties faced by teachers in using the unit plans.

The lesson plans were received from sixteen inspectors of schools of different districts of Rajasthan and four directorates of primary and secondary education, Rajasthan. The unit plans received were of two types; (i) unit plans produced by the directorates; and (ii) unit plans produced by the district authorities at their own levels. These unit plans were evaluated by the specialists of the respective subjects on a five point rating scale containing seventeen rating points.

The evaluation revealed the following characteristics of the unit plans produced at the state as well as district levels. (i) Unit plans produced at state level were rated above average on the rating points, namely, clarity of objectives, mastery of the subject, clarity of thoughts and proper sequence of subtests. All the unit plans were rated poor on the point of suggested remedial teaching. The unit plans in English and general science for class VI were rated superior to unit plans in other subjects. The unit plans in Hindi for classes VI, VII and VIII and in geography for class VIII were rated above average in respect of many rating points. The quality of unit plans in English for classes VII and VIII were rated average on most of the rating points. (ii) The unit

plan produced at district level in English by inspectorate at Fuli were rated higher than the unit plans in the same subject got prepared by inspectors at Ajmer. (iii) Almost all unit plans were rated above average in respect of rating points, viz., mastery of the subject matter and division of units. (iv) Almost all unit plans prepared by inspectorate at Alwar were rated below average in respect of rating points, namely, providing hints for teaching aids, neat and tidy work habits suggested and class management provided. (v) The quality of unit plans prepared at directorate level was superior to the unit plans prepared at inspectorate level. (vi) The unit plans did not contain sufficient indication for additional reading with a view to enriching the curriculum. The school libraries did not contain books suggested for extra reading. The teaching aids for which instructions were given in unit plans were not available in schools. The unit plans did not give guidance to teachers with regard to reteaching of content after having administered unit tests in the concerned subjects.



Group-II

Volume-III  
Abstract-196

PSYCHOLOGICAL CORRELATES OF SOCIAL DEPRIVATION:  
A PSYCHOLOGICAL STUDY OF POVERTY AND BACKWARDNESS

(Author - Moorjani, J., Ph.D.Psy., Jod. U., 1979)

The study attempted to probe into the various psychological correlates of the socially deprived school going children. The hypotheses formulated were (i) There were significant differences in the mental abilities of the socially deprived individuals, (ii) The personality structure of the socially deprived as revised by the personality test score would show significant differences, (iii) Social deprivation was directly related to the lower level of aspiration, (iv) Self-concept was directly related to the socio-economic status.

The sample consisted of 300 school going children belonging to the lower socio-economic status and 100 school-going children belonging to the high socio-economic status (control) from a Jodhpur city. The mean age of the children was eleven years, ranging from nine to twelve years. The psychological instruments used were Coloured Progressive Matrices, Children's Personality Questionnaire, Self-Concept Inventory (Hindi version) and Socio-Economic Status (SES) Scale (Urban). The mean and the t-test was used employed to analyse the data.

The major findings were: (i) There was a significant difference in intelligence, personality, level of aspiration and self-concept between the low socio-economic status group and the high socio-economic status group. (ii) The school going children belonging to the high socio-economic group were outgoing, warm-hearted, easy-going, and participating. They had higher intelligence and abstract thinking and were bright, emotionally stable, reality facing, assertive, callous, independent, aggressive and stubborn. (iii) The subjects belong to the low socio-economic status group were found to be excitable, impatient, demanding, overactive, conscientious, perserving, rule bound, tender minded, dependent, overprotected, sensitive, doubting, obstructive, individualistic, reflective, internally restrained, apprehensive, worrying, depressive, troubled, tense, driven, overwrought.

and fretful. (iv) The high SES group had higher mean scores on self-concept as compared to the low SES group. (v) The high SES group had a higher self-ideal discrepancy than the low SES group. (vi) The mean level of aspiration of the low socio-economic status group was 45.08 and that of the high socio-economic status group was 130.8. (vii) There was a negative correlation between the scores on coloured progressive matrices and self-concept. The scores on coloured progressive matrices were positively related to the scores on the level of aspiration and self-concept was also positively related to the level of aspiration.

71. I

Group-III  
Abstract-113 818

# AN-EXP ERIMENTAL ON OPEN LEARNING,

( Author- S. SAINT, Vidya Bhawan, Udaipur

The objectives was to provide an open learning environment to children to enable them to develop at their own pace.

Children from varying background were enrolled. The age range of the children was 5-10 years and were grouped on the basis of age, grade IA comprised 5-6 years old, Grade IB 6-7 year olds and Grade II comprised 8-9 years old. The entire school met in a large hall which contained a variety of play equipment as well as display material for different subjects. Though the activities the children were exposed to basic skills in mathematics, English and Hindi. Though the children were encouraged to participate in the activities organised by teachers they were allowed to work on their own.

The principles on which the experiment was undertaken were greater freedom to the learner and teachers to plan learning experiences, self pacing in learning, individual attention, cooperative effort in learning, ungraded structure, encouragement to self learning, less emphasis on teaching and more on learning, bilingual programme child's progress to be evaluated according to his own ability rather than on the basis of examination and close involvement of parents.

Case studies of ten children revealed (i) There was marked differences in their interest and participation in activities; those who earlier disliked school and had even left the previous schools began enjoying coming to school (iii) There was significant development as regards social skills both in schools as well as home, and also of values (iv) Streamlining to other school was smooth in case of children who had been in the open learning environment (v) With the help of a parent teacher discussion group close contact was maintained between parents and teachers, progress of children was discussed with teachers along with general discussions pertaining to education of the children, parents were encouraged to visit the programmes.



GROUP -II

VOLUME .I  
ABSTRACT -13

A CRITICAL STUDY OF THE THEORY AND PRACTICE OF BASIC EDUCATION WITH SPECIAL REFERENCE TO THE PSYCHOLOGICAL BASIC NEEDS AND THE STRUCTURE OF THE SOCIETY AIMED AT BY THE CONSTRUCTION OF INDIA, PH.D. EDU., MADRAS, U., 1956.

(P.K. NAYAK)

The study was designed to analyse the state of affairs of the existing system of elementary education and its unsuitability, nature of the present society and the claim of Basic education, nature of social structure of the Basic classrooms, whether institutional programmes therein represent modern trends in educational theory and practice and finally, the trends in personality development and behaviour resulting from the Basic school experience.

The data of the overall study were collected through visits to schools, interviews with the workers in the field, observation, tests of basic skills in reading, ~~and~~ writing and arithmetic, attitude and personality tests, rating scale and a questionnaire. The sample for comparative study based on tests and questionnaires was drawn from boys in four Basic and four non-Basic schools and consisted of about 170 from each group.

The major observations were summarised as follows: The cardinal aim of Basic education was the development of each child's inherent potentiality to the full. Basic school contributed to the child's security, a personality need by making it homelike and attractive with varieties of activities of citizenship, crafts and group game. The concept of economic structure behind Basic education was decentralised agriculture and commerce supported by cottage industry. The children learnt democracy in Basic schools by actual practice through democratic planning of work. In the comparative study it was found that in matters of self adjustment, social adjustment and life adjustment the Basic school children were better, but in the matter of 'belief' in the ideas of social order of our conception, Basic and non-Basic school children were undifferentiated. Also there were no significant differences between the two groups, in intelligence, reading, arithmetic ability, critical thinking, and knowledge of current affairs. The study on the whole suggested that Basic schools would provide better opportunity for the development of children, and there were no traumatic symptoms in the development of academic skills and life adjustments of the pupils due to the new method.



GROUP -II

VOLUME -I  
ABSTRACT -413

AN ANALYTICAL AND EXPERIMENTAL STUDY OF BACKWARDNESS AT  
THE PRIMARY SCHOOL STAGE, PH.D. EDU., MADRAS, U., 1961.

(P.M.LOHITHAKSHAN)

The purposes of this investigation were -

- (i) to determine the association of social environmental factors with educational backwardness.
- (ii) to experimentally analyse the behavioural tendencies of backward children and
- (iii) to study these children by using the sociometric technique.

The sample was drawn from two upper primary classes of seven primary schools within the radius of four miles. Eightytwo boys and fiftysix girls, of backward group and seventysix boys and fiftytwo girls of normal group were studied on the basis of testing and teachers' ratings. For behaviour traits, fifty pupils of normal group and fiftysix pupils of backward group were studied through observation. The study was limited to the backwardness in only two subjects, viz., mother tongue and arithmetic. For general backwardness, intelligence and achievement, tests were used. The Draw-a-Man Test, the Silent Reading Test and a language composition test, were used with modifications. Some information was also collected by a case study schedule. A sociometric test was administered to ascertain the part played by the backward child in the classroom group.

The important findings were as follows :

- (i) the educational backwardness was associated with communal backgroundness;
- (ii) early admission to higher classes on the basis of private study had a healthy influence on educational achievement;
- (iii) the first-borns were not different from others;
- (iv) poor economic home conditions as well as irregular school attendance were related to educational backwardness;

- (v) the pupils of backward group were significantly lower in intelligence;
- (vi) the backward children were inferior with regard to the following traits; confidence, persistence, assertive attitude, observation, capability, concentration, favourable attitude towards school work, sociability, sensitivity to praise and blame, and regard for self;
- (vii) the backward pupils tended to be less enterprising in school work, less envious and less cheerful;
- (viii) they seemed to be less adjustable; the boys were less social and the girls less adjustable;
- (ix) the backward children preferred normal children as their friends.



A STUDY OF ADJUSTMENT DIFFICULTIES AND THEIR RELATION  
TO SECOND LANGUAGE ATTAINMENT OF BILINGUAL CHILDREN,  
PH.D. EDU., MADRAS. U., 1963

(T.S. RAO)

The purpose of the study was to find out the effect of bilingualism on adjustment and academic achievement. The hypotheses examined were ..

- (i) the bilingual child shows relatively more problem behaviours than a monoglot and to that extent is maladjusted and
- (ii) the degree of maladjustment is related to the second language attainments.

A sample of 226 children comprising an equal number of boys and girls with Kannada or Telugu as their mother tongue, was drawn from grades I to V of thirty primary Tamil medium schools in the city of Madras. The age range was from six to ten years. These children came from lower middle class. Two adjustment inventories devised by the investigator and the Raven's Progressive Matrices were used. For measuring accomplishment in language, the subjects were tested with the Picture Vocabulary Test, the Direction Test and the Comprehension Test. For testing the first hypothesis, the matched group technique was adopted. The three-way analysis of variance was used to analyse the maladjustment scores.

The study revealed that:

- (i) the bilingual girls showed poor academic achievement in comparison with Tamil girls, whereas the same does not appear to be true for boys;
- (ii) the mean maladjustment scores for the experimental group was higher than those of the control group; and
- (iii) the difference in maladjustment scores was due to the difference in the scores of the girls in the two groups. Thus, the first hypothesis was partially acceptable. The second hypothesis did not sustain the test as the maladjustment scores showed very low negative correlation with second language attainment scores. It was significant to note that the bilingual girls were found to be superior to boys in language.



GROUP -IIVOLUME -I  
ABSTRACT -443

CONSTRUCTION AND STANDARDISATION OF COIMBATORE ACHIEVEMENT  
TESTS, SRI R.K. MISSION VIDYALAYA TEACHERS' COLLEGE, COIMBATORE  
1957. (MOE FINANCED)

(A ARAM, P.RANGASWAMY &amp; M.FEROZE)

The objective was to construct and standardise achievement tests in English, general science, social studies and mathematics for the middle school stage.

Four subject committees drawn from the staff of the various sections of the Vidyalaya worked out the general objectives and key concepts of different subjects. Test items were developed in accordance with these objectives and key concepts. Information about the characteristics of schools in various districts was procured from the District Education Officers. The stratified random sampling procedure was adopted to select schools for test administration. The English test consisted of five subjects, viz, language usage, spelling, punctuation, capitalization and reading comprehension and vocabulary. The test items were of the works that frequently appeared in the textbooks of the schools. A preliminary tryout of the tests on 245 pupils from seven schools was carried out. Pretesting was done on 503 students from twelve schools. After scoring the tests, item analysis was carried out. The five refined tests and part II having two tests. These tests were finally administered to 1030 pupils selected randomly from twenty schools of Coimbatore district. Uniform directions were prepared. The curricular validity of the test was assured by the procedure adopted in the items selection itself. The split-half reliability coefficients for part I and II were found to be .82 and .96, respectively. The means for parts I and II were 69.00 and 49.00 with SDs 11.95 and 14.82, respectively. Percentile norms were also prepared. For the construction of the science, mathematics and social studies tests, almost the same procedure, as in the case of English test, was followed. The science test was prepared in two parallel forms. After a preliminary tryout and pretesting, the test was administered to a final sample of 937 students selected randomly from fifteen schools. The mathematics test consisted of two parts and after a preliminary tryout and pretesting, its final administration was done on 1120 students from seventeen schools. The reliability coefficient for this test was found to be .39. Standard scores and percentile norms were computed. The distribution of scores was found to be very much skewed. The validity was tested by correlating scores on this test with scores on comparable teacher made test. The validity coefficient was .48. The social studies test was first made of two parts with a total number of 162 items. Pretesting and item analysis were carried out and

120 items were finally selected. These items were then divided into two equivalent parts and administered to 1520 pupils selected randomly from twentyfour schools. The curricular validity of the test was assured by the adequate sampling of the contents of the course in social studies.

Group- II

Vol.III  
Abstract-393

ECONOMIC ASPECTS OF GROWTH OF PRIMARY EDUCATION  
IN TAMILNADU,

(Author - K. Venkatasubramanian - Ph.D. Eco, 1977)

The major objectives of the study were:-

(i) to compute the costs of various inputs of primary education in Tamilnadu- Factor costs, Unit costs,

(ii) to make a cost benefit analysis of primary education in Tamilnadu by finding the rates of return and some other intangible effects related to economic development,

(iii) to find out the internal efficiency and productivity of the system of primary education in Tamilnadu

(iv) to locate the pitfalls and weaknesses hindering the efficiency of educational system

(v) to identify the constraints on universalization of primary education in Tamil Nadu and

(vi) to measure the wastage in primary education and its impact on the system of education and economic system as a whole.

Educational statistics compiled at the States and national level were mainly used for analysis in respect of enrolment and investment on education. Data related to economic indicators were obtained from the Department of Statistics. For cost benefit analysis, factor costs and unit costs of the primary education estimated from the available data for the year 1970-71 were used. Primary data on private expenditure were collected from parents all over the State, on stratified sample basis, by the investigator. Data were also

collected on (a) wastage and stagnation in education and (b) opinion of agriculture researchers, the effect of primary education on primary, secondary and other sector of economy are studied separately.

The major findings of the study were:-

(i) The variations in enrolment were influenced by the school facilities provided, the literacy level attained by parents, the number of inhabited villages etc..

(ii) A comparison with all India growth trends in enrolment showed that progress in Tamilnadu was more impressive at the higher primary level.

(iii) The percentage of unit costs to per capita was 30.01 for lower primary and 107.7. for higher primary both private and social expenditure.

(iv) The coefficient of efficiency of primary schools was found to be 0.55.

(v) The cost of wastage in Tamilnadu was 211.05 lakhs. The poor economic status of parents and the inability of the management to provide better facilities contributed to wastage.

Group-II

Volume-III  
Abstract-482

CHILDREN'S CURIOSITY AND ITS RELATIONSHIP TO  
INTELLIGENCE, CREATIVITY AND PERSONALITY

( Author - Kauser, F., Ph.D. Psy., Madras, 1982)

The study was an exploratory attempt to investigate the relationship of curiosity to intelligence, creativity, extraversion and neuroticism in elementary school children of 7 to 10 years of age. It also aimed to find out sex difference in curiosity in children of the same age group as well as differences in curiosity between the high and low socio-economic status groups of 10 year old boys and girls.

For assessing curiosity, an adaptation of Maw and Maw's, 'The You Test' of curiosity was used. Goodenough's Draw-a-Man test adopted by Phatak was used to measure intelligence. Creativity was assessed by the short scale of the Wallach and Kogan battery of creativity instruments as adapted by Paramosh. Extraversion and neuroticism were found out by means of the Junior Eysenck Personality Inventory as adapted by Sarcjini. The sample for the main study consisted of 500 boys and girls of age 7 to 10 studying in Standards III, IV and V drawn at random from four schools in the city of Madras.

Major findings of the study were:

- (i) There was no significant relationship between curiosity and intelligence on an overall basis except for girls of 10 year age.
- (ii) The relationship between curiosity and creativity was significant only for certain age group. However, no developmental trend was observed.
- (iii) The relationship between curiosity and extraversion was significant for certain age groups and for certain subtests of curiosity. Overall, there was no significant relationship between curiosity and extraversion.
- (iv) The relationship between curiosity and neuroticism was not significant.

- (v) The multiple correlation between curiosity and intelligence, creativity, extraversion and neuroticism for different age groups indicated overall significant relationship. It was therefore, inferred that curiosity was a combined effect of the variables intelligence, creativity, extraversion and neuroticism.
- (vi) Boys generally scored higher in curiosity than girls. The younger age groups showed a higher level of curiosity than the older groups.
- (vii) There were significant differences in curiosity between high and the low socio-economic boys and girls of the 10 year age group. The difference in curiosity between the high and low socio-economic status groups of girls was more pronounced than that of the boys.
- (viii) Curiosity is a multi-factor phenomenon and a complex construct involving cognitive and personality factors.



THE ORIGIN OF PREJUDICE IN CHILDREN-  
A PSYCHOLOGICAL STUDY

(Author- S.K. Vyas- Madras U., 1971

The aim of the investigation was to study the influence of various sociological and personal factors, namely, caste, religion, socio-economic status, age and sex on the learning of concepts and the respective prejudices among children. The attitude of the parents and their behavioural practices were also studied as factors influencing the learning of prejudices by children.

The main hypothesis advanced was that prejudice was learnt and increased with advance in age. The attitude of parents towards the groups and out-groups and their behavioural practices would be related to children prejudices. A modified version of Clark's doll interview method was adopted to study the prejudices of children. Three tools were administered to parents, Behavioural Scale, Sharma's prejudice Scale and Semantic Differential Test. Behavioural scale studied the orthodoxy and the non-permissiveness of the parents. From Sharma's Scale, the sections related to authoritarianism, conventionalism and ethnocentrism were used. The Semantic Differential Test studied the attitude towards thirteen in-group and out-group concepts. Seven hundred children from nine schools ranging from three to eight years in age group were sampled for the study. The parents of 518 children returned the Behaviour Scale and the Prejudice Scale duly filled in and only 322 parents returned the Semantic Differential Test.

The major findings were (i) Prejudices were learnt and increased with advance in age. (ii) Significant differences in the case of religious, class and linguistic prejudices were found in children in the age group three to eight, but in the case of caste prejudice the differences were not significant. (iii) a low but positive correlation was found between different types of the prejudice at each age level. (iv) Boys expressed higher prejudices than girls in all age groups. (v) The higher the caste of the children, the greater were the prejudices expressed. (vi) Socio-economic status was related to prejudice in caste, class and language but not to religion. (vii) Children's religious prejudice was related to parents' ethnocentrism but not to authoritarianism, conventionalism, orthodoxy and non-permissiveness. (viii) Children's caste, linguistic and class prejudices negatively correlated with parents' conventionalism.



GROUP -II

VOLUME -I  
ALSTRACT -143

DEVELOPMENT OF UNDERSTANDING DURING CHILDHOOD (6-12), PH.D.  
EDU., LUC.U., 1963.

(D JOSHI)

The purpose of this investigation was to study the development of understanding during childhood period from 6+ to 11+ and to suggest improvement in education of children. The hypothesis examined was that development of understanding takes place with age, and that there are sex differences in this regard.

The study was restricted to Lucknow only. Seven hundred and thirty children were selected randomly from six schools. Eight basic concepts, namely, self, social, aesthetic, comic, weight, time, space and number were chosen for the study. For children of six to eight, there were three interview schedules, each containing twentyfour questions based on geometrical figures, pictures, etc. For children of nine to eleven technique of questionnaire was used for getting data. The questionnaire consisted of 100 questions based on geometrical figures and pictures. Data were analysed by computing various statistical measures and then testing the differences between them for significance. Linear correlation, also, was used as a technique for analysis purpose.

The important findings were :

- (i) development of understanding goes with the growth of age; however, at certain stages achievement of two age groups for certain concepts is equal;
- (ii) girls are generally more developed in social, aesthetic and time concepts than boys, while boys are superior to girls as regards comic, weight and space concepts;
- (iii) girls of 6+, 10+ and 11+ are superior to boys with regard to development of self-concept whereas at 7+, 8+ and 9+ this order is reversed;
- (iv) only at the age of 9+, Boys' aesthetic concept is better than that of girls,
- (v) as regards the time concept, boys are better than girls at the age of 8+ and 9+;
- (vi) the comic concept of girls is better developed at the age of 6 and 7+ but that of boys excels that of girls at 8+, 9+, 10+ and 11+;

- (vii) for all age groups, the weight concept of boys is superior to that of girls;
- (viii) though the space concept of girls is superior at the age of 6+ and 7+, that of boys is superior at 8+, 9+ and 11+; at 10+ both are equal;
- (ix) the number concept of girls is more developed at 6+ and 8+, but not at the age of 7+ and 9+, that for both boys and girls are equal at 10+ and 11+;
- (x) at 6+ the highest developed concept is of space in boys, and space and comic concepts in case of girls and the lowest developed concept is the social concept;
- (xi) at 7+ the highest developed concept is the concept of number in boys, and the comic concept in girls, and the lowest developed concept is of self in boys, and of weight in girls;
- (xii) at 8+ the highest developed concept is number and lowest is self in the case of both;
- (xiii) at 9+ the highest developed concept is social and lowest is number for both;
- (xiv) at 10+ and 11+ the highest and lowest developed concepts are social and number respectively.

GROUP -II

VOLUME -I  
ABSTRACT -167

THE DEVELOPMENT OF EGO-IDEAL IN INDIAN CHILDREN (A SURVEY),  
PH.D. PSY., BHU, 1960

(P. PRATAP)

The study aimed at testing the proposition that the child's ego-ideal undergoes changes during adolescence.

The tool of research was a questionnaire prepared by the investigator containing the names of six heroes and six heroines and a list of corresponding masculine and feminine qualities. The questionnaire was administered to a sample of 800 students of which 500 were boys and 300 girls. About 150 boys and 100 girls of classes IV to VIII were in the age range of 9-12 years (pre-adolescent group), the adolescent group of age range 12-16 years consisted of 200 boys and 160 girls, while the adult group was composed of 150 males and 100 females.

The investigation revealed that

- (i) there is a fairly high degree of similarity between the structure patterns of the ego-ideal among the sexes represented by the scale values for the given lists of heroes, heroines and qualities;
- (ii) the ego-ideal patterns shown by the ranking of the male and female are highly correlated for adults;
- (iii) there can be a common ideal for both male and female the pattern of ego-ideal for girls undergoes a good deal of revaluation at the adolescent stage specially in the case of ranking of heroes, heroines and the ideal women;
- (iv) among the post-adolescent boys there is a certain degree of revaluation for the list of traditional heroes and the pattern continues fairly unchanged in respect to the ranking of heroines and the ideal man and women;
- (v) Boys show highest correlation between ideal qualities and heroes at pre-adolescent level and lowest at the adolescent level while the girls show highest at adult level and lowest at the pre-adolescent level;

- (vi) the evaluations of the heroines as well as their qualities are very similar after the pre-adolescent stage;
- (vii) the pattern of the ego-ideal seems to be independent of class distinction, social status, financial or sex differences; and
- (viii) the regimentation of preference among both males and females indicates the influences of parents, society, school and religion on the mental set-up of children.

GROUP -II

VOLUME- I  
ABS TRACT-170

A COMPARATIVE C.A.T.-cum-CASE HISTORY APPROACH TO THE  
STUDY OF PERSONALITY OF STARS AS WELL AS ISOLATES AMONG  
PRIMARY SCHOOL GOING BOYS OF AGRA, PH.D. PSY, AGRA.U,  
1970

(C.L.L. RAJPUT)

This longitudinal projective study examined the dynamics of the 'inner world' of super-ego, ego, defences, conflicts, anxieties, needs, drives, perceptions and action of the stars and the isolates. The stars and isolates were defined as the highest group acceptance-indifferent status respectively.

The basis of the study being the 'Family-school Personality' the C.A.T. study of the personality of both the groups was supplemented by case history results. The stars and the isolates were identified by a sociometric test and a teacher opinion test from fifty randomly selected schools. The design was basically an ex post facto one. The unidimensional character of variables underlying the multivariate complexes of stars and isolates showed the importance of the between-variance study, through a pluralistic comparison with a control group -the normals.

Analysis of the family background of stars and isolates showed that the isolates' families, either poor or rich, were educated. The highly child-involved parents were submissive. Mothers were more liberal. The stars' families were related to business men and labourers. Child-looking liberal parents were better educated. The mothers were better caretakers and also decision-makers. Stars had better scholastic achievement, more aggressive behaviour, and social participation. They possessed better self-reliance, drive and ego and were physically and mentally superior. Isolates compared to normals were hypoachievers in studies and participation, inferior in self-reliance, dependent and aggressive in behaviour, weak in drive, ego and physical fitness and adopted a resigned mode of behaviour. Results of C.A.T. indicated that strength and integration of ego was better in the stars and normals than isolates. Stars' and isolates' maturity was hyper and hypo respectively. Defence mechanisms in the stars and normals were repression, reaction formation, regression, and sublimation, while in isolates they were regression, flight, withdrawal and fantasy. All three groups feared physical harm and disapproval. Only isolates feared ~~sex~~ death and inadequacy, while stars feared castration. Stars suffered from conflict about super-ego aggression while isolates about achievement pleasure. Stars had a paranoid

character and isolates had a schizophrenic character. Multivariate complex of isolation and stardom was basically a carryover phenomenon of the family.



GROUP -II

VOLUME -I  
ABSTRACT -176

TO EXPLORE AND IDENTIFY THE MENTAL MATURITY MINIMAL IN INDIAN SCHOOL CHILDREN (A LONGITUDINAL STUDY OF THE DYNAMIC ORGANISATION OF MENTAL TRAITS), PH.D. PSY., AGRA U. 1967

(B.C. SHARMA)

The study was designed to explore and identify the mental maturity minimal in Indian school children.

The study was conducted on 240 boys of class VII of the group 10+ selected from three different schools of Firozabad. These boys were first tested for spatial, verbal, numerical reasoning clerical and mechanical ability abilities ; their interests in fine arts, literature, medicine, agriculture, technology, crafts, sports and household were also measured first in the year 1963. They were retested annually - first in 1964, second in 1965 and finally in 1966 (VII to X). Certain standardised tests were used for the purpose. Intercorrelations for all the possible pairs of the scores were calculated. Differentiation of abilities was investigated by analysing the correlations and disparity among the ability scores. Kelley's method was adopted to calculate the proportion of differences in excess of chance proportion (expressed in percentages) for all pairs of ability scores. Growth and development of abilities was also measured by (i) drawing the age curves, (ii) calculating the difference between the mean scores of successive age groups and by analysing the correlations between the same ability scores obtained after the intervals of one year. Permanence of interest was tested by correlating the test scores of different years and by observing the stability of the mean scores of successive administrations at ages 10+ to 13+. For this, significance of difference between the test and retest means of each test of interest was worked out by employing the t test, taking correlations into account.

It is found that all the ability scores, except the numerical one are normally distributed. Reliability coefficients of the ability test scores by K-R formula-21 ranged between .6 and .9. The analysis of correlations reveals that after 11+, there is a steady drop of correlation amongst the tests, with the growth of age. This trend indicates the increasing independence amongst the abilities with the advance in age. The study also revealed that -

- (1) the mental traits tend to become independent after the age of twelve and half years, and

- (ii) the permanence of interest is very poor at the lower ages but at the age of 12+ a high degree of permanence of interest scores is indicated. Thus the interests measured after the age of 12+ would be of good predictive value for the future performance of the students.

GROUP -II

VOLUME -I  
ABSTRACT -182

REASONING AND PROBLEM-SOLVING: DEVELOPMENT OF PRODUCTIVE THINKING IN CHILDREN (A STUDY OF CONCEPT FORMATION),  
PH.D. PSY., BHU, 1961.

(V. SYAMALA)

The aim was to make a comparative study of the development of concepts like dreams, thought, God, beauty, birth, cleverness, death, life, family relations and the origin of things in the Hindi speaking and Telugu speaking children. The experimental part of the study was based on the work of Piaget.

The sample consisted of 83 Hindi speaking girls in Varanasi and 80 Telugu speaking girls of Vuyyar in Andhra Pradesh, ranging from five to fourteen years in age. The selected concepts were studied in the case of Hindi speaking girls but the concepts of life, family relations and the origin of things were dropped in the case of the Telugu speaking girls. The controlled interview method was used.

The study revealed that -

- (i) the environmental influences ignored by Piaget are established by the fact that there is no systematic change in the location of dreams;
- (ii) the concept of thought is more advanced among the telugu speaking girls as compared to the Hindi speaking girls;
- (iii) the concept of God is more advanced in the Hindi speaking girls;
- (iv) according to the majority of the girls, the concept of beauty is determined by colour and the proportion of the features;
- (v) the concept of cleverness is more developed in the Hindi speaking girls than in the Telugu speaking girls;
- (vi) the concept of birth is more developed in the telugu speaking girls of lower age groups and among the Hindi speaking girls of higher age groups;
- (vii) the concept of death is more developed in the Hindi speaking girls than in the Telugu speaking girls;

- (viii) the concept of life is seen to develop by the age of 12 years and the thought tendencies are found similar to those of Piaget's study;
- (ix) with regard to the development of the concept of 'family relations', the relationship of sister is better understood by girls than the other relationships and it is concluded that a correct understanding of all the relationships may be expected at the age of eleven years;
- (x) there is no correlation between age and the selected concepts except the concepts of life and family relationships; and
- (xi) differences in sex, mental age, socio-economic status, educational facilities and other environmental influences produce differences

## A GROUP GUIDANCE PROJECT, ALLAHABAD, 1958.

(Author - BUREAU OF PSYCHOLOGY )

This project was a sequel to the Bureau's earlier project, viz., "The Allocation of Junior High School leavers to Four Types of Higher Secondary Education", undertaken in 1952, and in which the testing was done on an individual basis. The purpose of the present project was to provide a method of testing on group basis in view of the need of a large number of students for obtaining educational guidance. The objective was to advise the pupils in the choice of proper courses and subjects of study to be taken up by them in class IX and to assist the headmasters in allocating them to proper groups of courses, viz., Literary (A), Scientific (b), Constructive (C) and Aesthetic (D).

The sample consisted of 535 class VIII students from five schools in Allahabad, (1951-52). The required information about these students was obtained from parents, teachers and from the results of the psychological tests administered to these students. The parents, were requested to express in order of preference, four types of courses desired for their wards and also four professions or vocations which they would like their wards to select in future. The teachers were required to supply detailed information about each student, on a sociological schedule prepared by the Bureau, to recommend the type of course along with the subjects to be chosen and to express opinion regarding the professions or vocations in which the student was likely to perform well. In order to enable the teachers to judge the students objectively, the teachers' seminars were organised. The psychological testing was done on group basis. The following tests were used: (i) The Sohan Lall's Intelligence Test for 11+, The Bureau's Intelligence Tests for 13+ and 14+; (ii) The Hindi Attainment Test B.P.A.T. 2; (iii) The Form Relations Group Test, N.I.I.P. London. The criteria used for allocation were as follows: (i) Regarding intelligence, it was IQ 100 for B, 95 for A, 90 for C and 85 for D. (ii) Marked special aptitude for music and art, literary aptitudes and marked excellence in mechanical aptitude were the criteria for the allocation to group D, A, and B or C respectively. (iii) Regarding attainment, the student were required to attain at least average standard in the main subjects of the group to which they were allocated. Personality qualities and parents' wishes regarding the choice of subjects and courses were also taken into consideration for allocation.

The important findings were as follows: (i) The actual number of cases were 279. Out of these students, the Bureau recommended fifty-nine for group A, ninety-eight for B, 118 for C and four for D. The principal's allocations were eighty-eight for A, 117 for B, seventy-four for C and none for D. Out of the fifty-nine students recommended for group A, the principal allocated only thirty-three to A. Out of the remaining twenty-six, seventeen were allocated to B and nine to C. Out of the Bureau's recommendation of ninety-eight students for group B, the principal admitted only seventy-two; out of the remaining twenty-six, fifteen were allocated to group A and eleven to C. Out of the 118 students recommended for C, only fifty-four were allocated to C; out of the remaining sixty-four, thirty-eight were placed in A and twenty-six in B. Lastly, out of the four recommended for group D, none was allocated to it; two were placed in group A and two in B.

There was perfect agreement between the Bureau's recommendations and the principal's allocation in 159 cases out of 279. The coefficient of contingency was .48. (ii) There was greater agreement between the classmasters' recommendations and the Bureau's recommendations. The coefficient of contingency was .54 which was highly significant. (iii) The coefficient of contingency was .63 for the agreement between the parents' wishes and the Bureau's recommendations. (iv) In addition, the coefficient of contingency was worked out for the agreement between the Bureau's recommendations and the students' choices. It was .58. As regards the percentage of students' choices, forty percent wished to join group B; thirtysix percent to group A; twentyone percent to group C and three percent to group D. (v) The percentage of parents' and students' choice was more for group B (i.e. Science).

INTELLIGENCE AND INTELLECTUAL STIMULATION RECEIVED BY  
VIII GRADE STUDENTS UNDER DIFFERING STYLES OF JUNIOR HIGH  
SCHOOL EDUCATION IN UTTAR PRADESH, PH.D. PSY, AGRA.U.  
1967.

(P. RASTOGI)

This investigation has been undertaken to study how far the school systems or climates in the schools stimulate the students intellectually. It was hypothesised that the differences in development of mental or intellectual abilities of students can be attributed to quality of schooling, other factors being constant.

A battery of ten tests constructed and standardised in Indian situation by Chowdhary and one British test were used as tools in the investigation. Eighty-four students from age group of twelve to fourteen years of grade eight served as the sample. These students were drawn from convent schools with English as medium of instruction, higher secondary schools controlled by Allahabad Board of High schools and municipal schools run by local bodies,

The battery of ten ability tests was factor analysed by Spearman's and Thurstone's techniques. The following factor patterns emerged: Verbal-Spatial Concept-Formation, Verbal-Numerical-Introduction, Memory and Educational Skills. The overall results confirmed the hypothesis and also revealed that

- (i) the educational system followed by convents provide better intellectual stimulation than the other systems;
- (ii) the difference between the higher secondary schools and municipal schools is not as marked as that between convent schools and the other two categories; and
- (iii) even if homogeneous atmosphere of intellectual stimulation is maintained in all the systems of schooling, parents' socio-economic status is likely to have an effect on the tests of intelligence, especially on those saturated with 'g'.





GROUP -II

VOLUME -I  
ABSTRACT -268

A FACTORIAL STUDY OF PSYCHOLOGICAL TEST RESULTS AND SCHOOL MARKS OF STUDENTS OF CLASS VIII, PH.D. PSY., ALL. U.1960.

(R.G. MISRA)

The study aimed at discovering the order of abilities of students of class VIII and suggesting subject families, if any, to suit abilitywise groupings.

The sample comprising 929 students was drawn from seven towns of the Allahabad Educational Region. School marks in six compulsory subjects and scores on five psychological tests, in addition to certain other background variables formed the data of this study. Marks were converted into standard scores further treatment. Variables were subjected to factorial analysis by Thurstone's centroid method resulting in the extraction of six factors which were then suitably rotated to make meaningful interpretation possible, viz., -

- (i) verbal ability
- (vi) dealing mostly with the use and manipulation of the written words;
- (ii) spatial ability (K) involving perception and kinaesthetic manipulation of spatial relationships in two and three dimensions;
- (iii) a general factor (E) running through objective tests and school subjects comparable to Burt's general educability, reflecting more of industry than reasoning or abstraction;
- (iv) an ability (O) common to objective tests only, may be speed or form;
- (v) another form of verbal ability (V2) peculiar to mother tongue only; and
- (vi) some form of reasoning (SM) peculiar to science, mathematics and English.

Multiple regression analysis revealed that the battery predicted E.O.K, SM, VI, V2 in that order from the highest to the lowest (.832 to .453). Certain other significant inferences are that-

- (1) performances in Hindi, social studies, and art and craft have a little relationship to age, while those in English, mathematics and general science indicate a clear negative trend;

- (ii) instructions with students of lower mean age show better performance in all tests; and
- (iii) performance does not improve with age except in the test of spatial ability., where it indicates a sudden decline in the last age group.

GROUP -II

VOLUME -I  
ABSTRACT -291

CONSTRUCTION AND STANDARDISATION OF A NON-VERBAL GROUP TEST OF INTELLIGENCE WITH SPECIAL REFERENCE TO THE GUJARAT STATE (FOR THE CHILDREN OF AGE GROUP 7-13), PH.D. EDU., MSU.1964.

(G.B. SHAH)

The purpose was to construct and standardise a non-verbal group test of intelligence the children of age group seven to thirteen with special reference to Gujarat State.

The pilot study of the test was conducted on a sample of 1,150 pupils. After item analysis, the final form of the test consisted to 162 items. The various sub-tests included were similarly, classification, analogy, absurdity, progressive series, and substitution table. The standardisation sample consisted of 3,129 boys and 2,903 girls studying in grades III to VIII and drawn from seventynine schools in eleven districts of Gujarat. The reliability of the test was calculated by test-retest method, split-half method and method of rational equivalence. The validity of the test was determined against -

- (1) the verbal test of intelligence prepared by the faculty of Education and Psychology. M.S. University of Baroda,
- (ii) the standard scores of the total examination scores in four subjects (science, mathematics, English and Gujarati) and
- (iii) teachers' estimates of intelligence. Also, 'g' saturation was calculated both by the Thurstone's centroid method and by the Spearman's method. Age norms were fixed.

It was found that -

- (1) the coefficients of reliability of the test by the method of rational equivalence, test-retest method and split-half method were 0.961, 0.94 and 0.92 respectively;
- (ii) the validity coefficients of the test against the verbal intelligence test, examination scores, and teachers' estimates were 0.70, 0.55 and 0.53 respectively;
- (iii) boys and girls were found to be almost at par in intelligence upto age of eleven;

- (iv) the performance of girls was comparatively higher at the ages of twelve and thirteen, while that of boys was higher at the age of fourteen;
- (v) the differences between the means of rural and urban pupils were not significant at any age, except at the age of ten; and
- (vi) intelligence was slightly dependent upon the occupations of the fathers.

CRAFT AS AN EDUCATIONAL MEDIUM IN ELEMENTARY SCHOOLS  
PH.D. EDU., BHU, 1957

(S.L. CHATRUVEDI)

The author sought to discuss the role of craft as a medium of education in elementary schools.

The major observations are as follows:  
Craft occupies an important place in the education of child and teaches the dignity of labour. It helps in maintaining continuity between home and school life. It clarifies other school subjects and makes the child more adaptable to the varying conditions of modern industrial and social living. Physical activity provides for the healthy growth of the mind. Children gradually learn to handle things and their constructive and creative powers can be employed to better understanding of science, geography, history and other subjects in the school curriculum. Hand work should be made compulsory and bear relation to the child's environment and ease in execution. He should be able to produce something as a result of his labour.

The scheme should be flexible to cover diverse capacities. A group job encourages cooperative effort. Skill and discipline should be achieved in their social setting. Children can also be educated through play. As regards the training of craft teachers for elementary schools, the general teacher should be entrusted with the teaching of craft. Pupil teachers should, therefore, be given liberal training in wood-work, metalwork, clay modelling, cardboard work, paperwork and applied arts. Knowledge of the elements of architectural design, applied mathematics, regional geography, economic history, etc., is essential besides practice in class teaching. Selections of crafts in schools should be done according to the stage of development of children. In the manipulative stage lasting upto the age of six years, children are active, their movements are random, instinctive and changing. Variety and capriciousness characterise their activities. During this stage, pliable material like sand, clay, plasticine, etc. may be suitable to attract their interests. In the symbolic state lasting upto the age of nine years, pliable material such as paper, cotton, wool, leather, etc. should be supplied. In the third stage, when the sense of cause and effect and better muscular control is developed, useful articles from materials like, cardboard, cane, bamboo, etc. can profitably be made. The selection of craft

is effected also by the conditions like, natural correlation with other important human occupations and other subjects in the school curriculum, the local conditions, finance and facilities, and the staff available. Moreover, the selected craft should be suitable for being adopted either as a vocation in adult life or as a hobby during leisure. As regards the forms of educational handiwork not only cardboard, clay, plasticine, light work, cane, wire, etc., but also the old waste material like empty tin cans, corks, spools, cigarette boxes, etc. may also be used. The craft classes should not have more than twenty students. In the lower classes, the teacher should demonstrate and the children should be required to copy the same. The analytical method should be adopted in upper classes. The students should be encouraged to work out practical drawings and execute models according to their own dimensions.

GROUP -II

VOLUME -I  
ABSTRACT -334

GCPI, AN INVESTIGATION INTO STUDENTS' UNDERSTANDING OF SOME COMMON TERMS OF GEOGRAPHY, ALLAHABAD, 1963.

Objective of the investigation was to find out the areas of difficulty in the field of geographical concepts and suggest remedial measures for them.

A group of 303 students studying in class VIII of three local schools was selected. To assess the attainment of students who had completed their course in geography for class VIII, a test consisting of twentyseven questions with 108 items was designed to find out;

- (i) whether pupils gain anything like a satisfactory command of essential geographical terms,
- (ii) which terms present the greatest difficulty, and
- (iii) in which geographical areas pupils experience difficulty. The test items referred to common geographical terms in Hindi occurring in their test books. The questions were simple and did not require any previous preparation for answering them. Each item was assigned one mark the maximum marks were 108. The guess factor was eliminated as the students were asked to give brief answers by studying the data provided. The distribution of the scores was prepared. The analysis of the answers of each question was done on percentage basis.

The result of the test was disheartening and showed that eightyfour percent students scored less than twentysix, i.e., 24 percent marks. The answers showed that the terms were either very well understood or not understood at all. An analysis of the answers revealed the nature of pupils' understanding of these terms and gave some insight into their difficulties. From the survey of the results it is quite evident that very little emphasis is being laid in our schools on the practical side of teaching the subject.





Group-II

Volume-I  
Abstract-342

A COMPARATIVE STUDY OF THE INTEGRATED  
AND TRADITIONAL METHODS OF APPROACH IN THE  
TEACHING OF SOCIAL STUDIES TO CLASS VII

(Author - Khushdil, M.B.L., Dept. of Edu., Hindu  
College, Moradabad, 1960)

The purpose of this study was to compare the  
traditional and the integrated methods in teaching of  
social studies to class VII on the following:

- (i) assimilation by children of instruction  
imparted;
- (ii) effect of the two approaches on the behaviour and  
attitude of the children during the session;
- (iii) areas and aspects in which one is superior to  
the other;
- (iv) difficulties experienced by teachers and heads  
of the institutions during the practice period;  
and
- (v) exploring possibilities and scope of integrated  
teaching in the average school under ordinary  
circumstances.

Two groups of students of class VII of two schools  
were selected for the study. They were equated by means of  
an achievement test based upon the syllabus of class VI.  
The test was administered to students of two institutions,  
and forty pupils were equated in each institution on the  
basis of their raw scores. Two teachers were selected on the  
basis of general knowledge test to teach for one year  
to the two experimental groups. Both the teachers put in  
the same amount of work during the year according to the  
prescribed work schedule. The assignments and exercises given  
to the groups were kept equal. The teacher who taught  
through the integrated method integrated the syllabi of  
history, geography and civics, which constitute social  
studies, while the other teacher taught all the three  
separately. Learning outcomes in terms of knowledge and its  
application were measured by administering seven objective  
type achievement and essay type tests to the children  
during the session. At the end of the session, one attitude

test and one behaviour rating scale were prepared and administered to the children. The behaviour rating scale was rated by the parents of the children, the social studies teachers and another teacher teaching some other subject to the group under study. Differences in performances of the two groups were studied in terms of percentages and means, testing them for significance.

In respect of assimilation and acquisition of knowledge, it is found that the group taught through the integrated method did better; in respect of attitude, the integrated group shows more of critical attitude towards authority. The groups are similar in attitude towards the sick. The traditional group is, however, better in 'to help others'. With respect to behaviour norms the parents and the teachers differ, parents rated integrated group to be better, whereas teachers rated traditional group to be better; ordinarily, the heads of the institutions and social studies teacher experience no difficulties in organising and conducting teaching according to the integrated method except that the teacher has to put in more labour in preparing lesson notes and has to devote more time to the study of the subject. As regards the scope and possibilities of integrated teaching in an average school under normal conditions, the answer cannot be categorical. Most respondents felt that it is dependent on the teacher, his mental and professional calibre and the attitude towards the institution.

A COMPARATIVE STUDY OF "INDEPENDENCE CONFORMITY BEHAVIOUR" OF INTELLECTUALLY BRIGHT AND DULL PRE-ADOLESCENT STUDENTS, PH.D. PSY., AGRA U., 1973.

(Author: V.K. Gupta)

The major objectives of the study were: (i) to see whether childhood and adolescence had different impact on a man's independence and conformity behaviour; (ii) to see whether boys and girls had significantly different independence conformity behaviour because of sex variation; (iii) to see whether brightness and dullness of intelligence affected independence conformity behaviour differently; and (iv) to see whether other variables during their simultaneous operation on independence conformity behaviour interacted with each other.

In the present investigation schools were selected on a purposive sampling basis. In all, eight schools were selected. Subjects were selected from classes VI, VII and VIII, and from age groups ten, eleven, twelve and thirteen. For each age group 150 boys and 150 girls were selected randomly from 1400 subjects. Thus a sample of 1200 students was obtained. By administering a test of intelligence (Tandon, 1970) seventysix bright and dull children were taken out from each category of age. Out of 608 intellectually bright and dull children the actual sample for the experiment was selected. Thus the final sample comprised 400 students with eight subsamples of fifty subjects. The Tandon's Samochik Mansik Yogyata Pariksha was the tool used for selecting the sample on the basis of bright and dull levels of intelligence. The instrument for measuring the independence conformity behaviour was designed and constructed by the author.

The major findings of the investigation were as follows: (i) independence conformity behaviour increased in accordance with age, but it was not statistically significant; (ii) results showed that there was significant difference between boys and girls in their independence conformity behaviour; and (iii) independent conformists were of high intelligence; results showed that there was a significant difference at 0.05 level of significance between intellectually bright and dull independent conformists.



GROUP II

VOLUME II  
ABSTRACT-260

PERSONALITY PATTERNS OF CHILDREN OF  
CRIMINAL TRIBES OF U.P., M.D. EDU.,  
BHU, 1974.

(Author: S. Srivastava)

The enquiry aimed at studying the personality patterns of the children of criminal tribes of U.P.

The sample for the study included 100 boys studying in Ashram type schools of Allahabad, Lucknow, and Kalyanpur settlement of Kanpur. They formed a group of children of ex-criminal tribes. Another group of eighty nontribal boys was selected from various schools of the same three cities as in the first group. This group acted as a control group. Both the groups were matched on IQ and socio-economic status. All the boys included in the two groups belonged to the age group of 13+ to 15+. The tools used in the study were the Kuppaswamy's Socio-Economic Status Scale, the Thematic Apperception Test, the Rorschach Inkblot Test and an adjustment inventory.

The study revealed that: (i) the children of criminal tribes possessed low intellectual ability; (ii) They had confidence, but were shy at social interactions; (iii) though not satisfied with their existing status, they were optimistic about their future; (iv) they tried to gratify their immediate needs though they were not impulsive; and (v) they had control over their emotions though they were inferior in their social adjustments.



CONSTRUCTION AND STANDARDISATION OF A  
NONVERBAL GROUP TEST OF GENERAL MENTAL  
ABILITY FOR CHILDREN, PH.D. PSY., BHU,  
1967.

(Author: R.B. Tripathi)

The purpose of the study was to construct and standardise a nonverbal group test of mental ability which has been explained through a non-committal term 'g'.

The subtests selected were: classification, pattern completion, analogies and arrangement. On the basis of their 'g' saturation findings, each subtest had thirty items. The pilot study of the test was conducted on a sample of 500 children in the age group of eight to thirteen years studying in classes III to VII from two junior high schools of Moradabad which were selected by incidental sampling technique. After item analysis, the final form of test consisted of fourteen items in each of the classification and pattern completion, twelve and ten in arrangement and analogies respectively. The standardisation sample consisted of 3,253 students in the age range of six to fourteen years, studying in III to VII in primary and junior high schools in the northern, southern, eastern, western and central regions of the state of Uttar Pradesh.

The findings revealed that the coefficients of stability for the total test and its four subtests were sufficiently high ranging from 0.91 to 0.97 with SE ranging from 0.0002 to 0.006. The coefficients of consistency of the total test and its four subtests were very high ranging from 0.97 to 0.99. Kuder-Richardson method had yielded a quite satisfactory reliability for the total sample and for different age-grades. The item validity in terms of internal consistency of the present test was assured as all the items included were significant at 0.01 level of significance. All subtests included in the present battery possessed 'g' saturation varying from 0.671 to 0.861. Correlation of the present test with the Joshi's Verbal Group Test of General Mental Ability was 0.79. Intrinsic validity of the test was found to range from 0.984 to 0.990 for the total and subtest-wise scores. Age-wise and grade-wise centiles and T scores were also prepared.





GROUP II

VOLUME II  
ABSTRACT-380

VERBAL GROUP INTELLIGENCE TEST FOR  
8+ AGE-GROUP CHILDREN, GCPI, Allahabad,  
1972.

(Author: S.D. Upadhyay)

The objective of this project was to construct a verbal group intelligence test for the children of age group 8+.

In the construction of the test, 200 items were taken contemplating the different aspects of mental ability, namely, (i) ability to discriminate; (ii) ability to find out similarity; (iii) ability to find out opposites; (iv) ability pertaining to digit-series; (v) ability to establish relationship; (vi) ability of reasoning; (vii) concepts related to (a) time, day, year, (b) directions (east, west, south, north), (c) left and right, (d) family relations; and (viii) general information. Two types of items, namely, recall type and recognition type were used. A sample of eighty-two students (fifty-seven boys and twenty-five girls) was taken from the Demonstration Basic School for the tryout of the test. Only forty-five items were retained on the basis of certain criteria like pass percentage, internal validity, and comprehensiveness. Two aspects of the mental ability, namely, (i) concepts related to time, directions, left and right, family relations and (ii) general information, were eliminated and the rest were included in the test. The forty-five items were re-examined by the experts of the institute and those items were eliminated whose pass percentage value and internal validity were found relatively low. Thus, only twenty items were selected. It was felt to add some items based on memory power and so five items were added to the selected twenty items, making the final number of items twenty-five. The final sample consisted of 312 students (218 boys and ninety-four girls) and was drawn from all kinds of schools of Allahabad.

The reliability of the test was found by split-half method. The coefficient of correlation by product-moment method was found to be 0.78. Percentile norms were established.



GROUP II

VOLUME II  
ABSTRACT-387

AN EXPERIMENTAL INVESTIGATION INTO TYPOGRAPHIC  
DIMENSIONS AFFECTING READABILITY OF HINDI BOOK  
PRINT, PH.D. EDU., ALL. U., 1973.

(Author: B.S. Thagaliwal)

The objectives of the study were: (i) to find out, whether the different typographical dimensions, i.e., typesize, linewidth and interlinear spacing, had any direct effect on readability of Hindi print; (ii) to find out the optimum specifications for the various combinations of these variables; (iii) to investigate whether the typographical dimensions of Hindi print affected the readability of Hindi books on the same lines as in English, or differently; (iv) to discover whether speed of reading increased with the increase in age and class; and (v) to find out whether there was variation in readability of the children of the same class due to variation in schooling.

The sample for the study consisted of 621 students of the age group of 10+ to 14+ of classes VI, VII and VIII from the recognised boys' schools of Allahabad town. For the purpose of this study 3 x 3 x 3 factorial design was selected. As there were twentyseven variable combinations under study, class section was taken as a unit and about twentyseven students were assigned to each of the experimental passages printed in different variable combinations. All the subjects were tested for their vision level on the 'Snellen Chart' for a 20/20 or more of visual activity. Each subject was then asked to read out a control passage and an experimental passage, and time taken by the subject to read the passages was noted by means of a stop watch. After completion of reading, the subjects were asked questions based on the passages read by them. The observations of students with speech defects, vision defects or those having temporary illness and those who showed lack of comprehension were excluded. External factors like light, sitting arrangements, and distance between eyes and the book were controlled by means of using a reading stand and by following certain specifications.

The study revealed that (i) there was no direct effect of readability of Hindi book print from any of the three dimensions under study when taken up singly; (ii) only the interaction of two factors-type size and line width gave significant differences in reading speed; (iii) there was difference between typographic arrangements found satisfactory for English and Hindi; (iv) there was no significant increase in the speed of reading with increase in age, but there was steady but insignificant improvement in reading speed from grades six to eight; (v) the children studying in different schools showed wide variations in readability although they might be of the same grade; (vi) the only combination found satisfactory in Hindi as well as English book print was twelve point type size in four inches line width set solid or single lead, or double lead; and (vii) most of printing arrangements of nationalised textbooks did not conform to the typographic specification found satisfactory in this study.

GROUP II

VOLUME II  
ABSTRACT-389

INTRODUCTION OF THE DISCOVERY - ORIENTED  
APPROACH IN SCIENCE TEACHING AT THE SCHOOL  
LEVEL, VIGYAN SHIKSHA KENDRA, BANDA, 1976.  
(NCERT FINANCED)

(Author: Prakash Bharatendu)

On the basis of eight monthly meetings and a teachers' orientation course, a workbook for science teaching for class VI was developed. It was tried out on a large number of students and teachers which provided a good deal of feedback for its revision and finalisation. The final version of the workbook comprises curriculum, practical work and experimentation, involving the use of local resources. The contents are related to the common needs of the village community.

The curriculum thus devised aimed at improving the process of learning science and inculcating positive scientific attitude both among the students and the teachers. The philosophy of the discovery approach formed the very basis of the development and practice of this new curriculum.



A DEVELOPMENTAL STUDY OF THE RORSCHACH RESPONSE  
PATTERN OF CHILDREN BETWEEN FIVE PLUS AND TEN  
PLUS.,

( Author - G. Dixit., Ph.D., All.,U., 1963)

The aim of the study was to develop norms for the Rorschach test for children of five to ten years.

The sample consisted of three hundred boys and girls of Allahabad city of which fifty children at each of six different age levels, viz., five, six, seven, eight, nine and ten, were administered the test. They were drawn from forty institutions of Allahabad and belonged to families of teachers, servants (both government and private), businessman, lawyers and doctors, representing various castes, creeds and socio economic statuses. The central tendencies, dispersion and percentages were computed.

The findings were: (i) At the age of five children indicated a fairly good receptivity and responsiveness to the world around. They were factual and form controlled in them and was mostly governed by what was obvious. At the age of six, spontaneity as well as emotional reactivity were satisfactorily developed with the F column composed of common responses. The bulk of the responses were in central area indicating that children of six years had great attachment to reality and then perception like of five was governed more by what was obvious and factual and indicated less variegated experiences. At the age of seven, the perception was guided more by facts than by fantasy and emotion; children were matter of fact and realistic in the manner of responding. The perception was more determined by facts than by emotion or fantasy at the age of 8+. Children were factual and realistic in the manner of responding at the age of nine, the perception was mostly governed by the form quality of the blot indicating that they were realistic and factual in their manner of responding. Lastly, at 10+ the perception was more influenced by the form qualities of the blot than by fantasy and emotions, and was realistic and factual. (ii) At 5+ the outer central was socialized to a great extent. Though there was presence of semi-controlled responsiveness indicating emotional instability and impulsiveness, along with chances of uncontrolled emotional outbursts, they were gradually controlled by learning to express emotions in a socially approved manner. Children did not possess enough inner resources which could engage them to meet emotional impact to gain

control over outward expression of behaviour. The ego organization was fairly well integrated at the age of 5+. At the age of 6+, they gradually tried to gain more command over emotional expression and made definitive advance in the area in comparison to those at 5+. There was a lack of inner resources required for adequate inner control. The ego was fairly well-integrated and its organization was better than the previous year. At the age of 7+, the control of emotional responsibility and impulses to the outer world was evident by the socially approvable behaviour; there was improvement in inner resources necessary for adequate inner control. The ego at this age was better organised and more integrated. At the age of 8+ for controlling than emotional responsiveness to outer environment children had acquired certain socially approved mode of behaviour which they used to express their emotions. At this age, they possessed better resources for maintaining proper inner control. Their ego was properly developed and well organised. At the age of 9+ the subject had good emotional responsiveness and had comparatively better inner resources at then disposal for adequate inner control, while the ego was fairly well organised and was in touch with reality. At the age of 10+, the subjects had control over emotional impact without loss of responsiveness. They had comparatively richer inner resources required for adequate inner control and then ego organization was properly integrated. (iii) Children at 5+ were fairly well adjusted to their environment. The adjustment levels improved with age. (iv) Children of five years old were extratensive and emotionally more reactive to the factors of environment. There was extratensive balance at the age of six. At seven years, children were more responsive to the prompting from without than from within. At the age of eight years, the subjects were extratensive. The nine year old children were more responsive to their environment both in terms of overt emotional expression and affectional warmth of feeling. The ten year old children reacted to the environment freely both in terms of overt emotional expression and affectional warmth of feeling. (v) The percepts and concepts of the five year old child were definite and clear. The reasoning by power improved with age at ten, the child's memory images were more defomote and clear. (vi) The five year old children lacked well developed value system and emotional integration. The six year old children had better emotional integration and their ego was becoming somewhat tolerant of some archaic or primitive impulses. The seven year old child was more nature and conscious of the fantasy process. They had a capacity to absorb experience and to benefit by it. The presence of better developed value system and greater empathetic understanding and acceptance of archaic needs along with creative imagination were found in the eight year old child. Now they possessed more capacity to absorb experience and to benefit by them.



GROUP II

VOLUME II  
ABSTRACT-472

AN EXPERIMENTAL STUDY OF FORMAL AND  
THEMATIC PROMPTS IN A LINEAR PROGRAMME  
IN GEOGRAPHY ON MAP READING FOR CLASS VII,  
PH.D. EDU., MEE. U., 1973.

(Author: B.P. Singh)

The study aimed at examining the effectiveness of formal and thematic prompts with regard to different intelligence levels and taxonomic categories. The specific objectives of the study were: (i) to analyse the relative effectiveness of formal and thematic prompts; (ii) to find out the effect of formal and thematic prompts at different levels of intelligence; and (iii) to find out the effect of formal and thematic prompts for different taxonomic categories. The hypotheses tested were: (i) there would be a significant difference between formal prompts treatment and thematic prompts treatment; (ii) there would be a significant difference between formal prompts treatment and thematic prompts treatment for different taxonomic categories, for the attainment at memory level, and for the attainment at understanding level; and (iii) thematic prompts would be more effective at higher level of intelligence, whereas formal prompts would be more effective at lower level of intelligence.

The sample consisted of two sections of class VII randomly drawn from the local institutions of Meerut City. The sample consisted of students with high, average and low levels of intelligence. The study was a (2 x 3 x 2) factorial design. Achievement of students was taken as dependent variable and intelligence levels and taxonomic categories as independent variables. The prompts were the primary independent variables. The reliability coefficient of the final draft of the criterion test was found to be 0.83 when computed by K-R formula. Analysis of variance and t test were used for analysing the data.

The findings revealed that (i) thematic prompts were effective as compared to formal prompts; (ii) the achievement of students having high intelligence was superior to those of average and low levels of intelligence in both the treatments; (iii) thematic prompts were more effective at high level of intelligence as well as at average level of intelligence, as compared to formal prompts; (iv) the attainment of students at understanding level in thematic prompt case was superior to that in formal prompt case; and (v) formal and thematic prompts were equally effective for the attainment at memory level.

AN EXPERIMENTAL STUDY OF INTERACTION EFFECTS  
OF STYLES OF PROGRAMMING, RESPONSE MODE AND  
TAXONOMIC CATEGORIES IN GEOGRAPHY, PH.D. EDU.,  
MEE. U., 1977.

(Author: G.S. Verma)

The major objective of the study was to ascertain the interaction effects and main effect of styles of programming, response mode and taxonomic categories.

The study was conducted on a sample of 240 students of class VIII in two cycles. The two styles of programming - linear and branching - were developed on the topic 'Earth as a Planet' in physical geography. A mixed 2 x 2 x 2 factorial design with three variables - styles of programming (A), response mode (B) and taxonomic categories (C) was used.

The major findings of the study were as follows:

- (i) Branching programme was more effective to linear programme. But linear programme was more effective at knowledge level, whereas branching programme was more effective at comprehension level.
- (ii) The branching programme with covert response mode at comprehension level was more effective to linear programme, whereas linear programme with covert response mode at knowledge level was superior to branching programme.



GROUP II

VOLUME II  
ABSTRACT-540

CONSTRUCTION AND STANDARDISATION OF A  
DIAGNOSTIC READING TEST IN HINDI FOR  
CLASS III PRIMARY, LUCKNOW, 1971.  
(NCERT FINANCED)

(Author: I.T. Gillage)

The project aimed at constructing and standardising a diagnostic reading test in Hindi for class III.

Items were constructed and were run as a pilot study on a sample of fiftytwo pupils of class III. One hundred items were selected and divided into five parts. This form of the test was administered to a sample of 327 pupils of class III of schools of six selected areas of U.P. The final form of the test consisted of five parts, viz. Hindi usage - giving alternative, Hindi usage - filling the missing words, vocabulary, paired combinations, and silent reading. The final test was administered to 937 pupils (572 boys and 365 girls), both rural and urban, of class III of schools of U.P.

Concurrent validity of the test was found to be 0.69. The coefficient of reliability by split-half method was found to be 0.90. Percentile norms were developed.



Group-II

Volume-III  
Abstract-160

A STUDY OF CONSERVATION AMONG TRIBAL AND  
NON-TRIBAL CHILDREN

(Author - Jha, T., M. Phil. Psy., All. U., 1981)

The main objective was to study Piagetian concepts of conservation of mass, number and volume, cross-culturally. It aimed at finding out (i) whether cognitive development in non-western countries took the same course, viz., sequential succession of stages as stated by Piaget, (ii) whether the Indian children committed the same logical errors on conservation tasks, and (iii) whether they followed the same developmental sequences and age levels on different conservation performances as the children of the West.

The sample which had been randomly selected (N=240) belonged to the age-group 4-10 attending government and private nursery schools. Oraons, Mundas, Khariss and Ho were the main tribes selected for the study. For conservation of mass clay balls weighing 250 gms. were used. Ten questions of three types viz., those of prediction, judgement and explanation were asked. A factorial design of  $3 \times 2 \times 2 \times 2$  was used for three different levels of age, two sexes (male and female), two types of cultures (tribal and non-tribal) and two kinds of habitation (rural and urban).

The main findings of the study were: (i) Only ten out of 240 students of age levels 4 to 10 could obtain full score on mass and number conservation and only nine could achieve full score on volume conservation, the percentage was 4.17 and 3.75, respectively, which was a low performance. (ii) The age factor seemed to play an important role in the attainment of different conservation tasks. Older children scored significantly higher than the younger ones. (iii) With respect to sequential attainment, the mass was conserved first followed by the volume and the number was conserved last. Thus the sequence emerged as mass, volume and number. (iv) Sex was not found to be a factor for cognitive competence.

Male and female children did not differ significantly in the acquisition of different conservation tasks.

(v) The impact of culture was not perceptible in the attainment of different conservation tasks. The tribal and the non-tribal children did not differ significantly in the acquisition of different conservation tasks;

(vi) The explanation criterion was found to be the most difficult, while that of prediction was less difficult for the children. (vii) The scalogram analysis revealed three stages of cognitive development - (a) The perceptual stage, (b) The intermediate stage; and (c) The conservation stage.



Group-II

Volume-III  
Abstract-173

REDUCTION OF ABUSIVE BEHAVIOUR AS A FUNCTION  
OF TYPES OF REINFORCEMENT AND AWARENESS IN  
SOCIALY DISADVANTAGED CHILDREN

(Author - Khattri, P.K., Ph.D.Psy., Luc.U., 1979)

The purposes of the investigation were (i) to bring about a reduction in the abusive behaviour as a function of types of reinforcement and awareness among socially disadvantaged children, (ii) to study the effects of caste and birth order, and (iii) to ascertain the transfer and maintenance of the gains of modified behaviour.

The subjects of the study were 150 boys of Classes VI to VIII randomly selected from six elementary schools situated in various slum areas of Lucknow city. They ranged in age from 13 to 16 years. The range of father's income was Rs. 100 to 450 per month. A pre-test post-test design was used in this study. A sentence construction task devised by Taffel was chosen for the study. The stimulus material consisted of 100, 3x5 inch white index cards on each of which a different proper noun was typed in Hindi. Below each noun three abusive and three non-abusive Hindi adjectives were typed, a total of ten abusive and ten non-abusive words were used. The order of placement of the words on the cards and the order of their presentation were randomized. The data were analysed by using analysis of variance followed by the t-test.

The findings were: (i) Significant differences in abusive word usage between the control and the experimental groups were observed. (ii) Negative reinforcement was observed to be more effective than positive reinforcement for reducing the abusive word usage. (iii) There was a significant difference between the two levels of state of awareness and two levels of reinforcement. (iv) Negative reinforcement was always found better for both the states of awareness as compared to positive reinforcement. (v) The abusive word usage was not a function of the caste. (vi) The non-scheduled caste subjects improved better than the scheduled caste subjects under both types of reinforcement. (vii) Negative

reinforcement was observed as more effective than positive reinforcement for conditioning irrespective of caste. (viii) Both types of reinforcement were effective for both types of birth order. The first born improved more under the positive reinforcement whereas the last born improved more under negative reinforcement. (ix) The reduction in the abusive word usage was a function of conditioning with generalization from laboratory training situation to natural situation.

ECONOMICS DEPRIVATION AND EDUCATIONAL  
ACHIEVEMENT : A PSYCHOLOGICAL STUDY

( Author- J. Singh, Ph.D., Psy., 1979)

The study aimed at finding out the relationship between economic deprivation and educational achievement. The specific areas of the study were listed in the form of three hypotheses. The sample consisted of 400 children studying Grades I and V in urban and rural primary schools of which 200 belonged to grade I and 200 to Grade V. These were again grouped into the economically deprived and the affluent groups in each grade. Tools used were a socio-economic status questionnaire prepared by the investigator, SES Question(Rural)Pareek and Socio-Economic Status Scale(Urban)(Kuppuswami), Porteus Maze Test and achievement tests in Hindi, arithmetic, social science and general science prepared by the investigator. The data were analysed for testing the hypotheses by using t-test, product moment correlation and multiple regression analysis.

The major findings were:-

(i) The mean I.Q. of the rural subjects in both the economically deprived and the affluent groups was significantly higher than that of the urban subjects, as measured by the Porteus Maze Test. (ii) the affluent group students of both the urban and rural samples scored significantly higher on intelligence test than the economically deprived groups.

(iii) The Economically deprived students were significantly inferior in Hindi than the economically affluent subjects.

(iv) The rural students were superior in Hindi than the urban ones.

(v) The economically deprived students were significantly inferior in mathematics, social studies and general science but to rural students were superior than their urban counterparts.

(vi) In total achievement again, the economically deprived students were significantly inferior to the economically affluent students but the rural students were superior to the urban students.

(vii) Correlation studies indicated almost negligible relationship between socio-economic status and academic achievement. Though not significant the relationship between socio-economic status and educational achievement was negative in the rural sample but positive in the urban sample.

(viii) The effect of intelligence was much more than socio-economic status on the academic achievement in all the samples.

(ix) The regression equations developed for the prediction of achievement scores in different subjects as well as the total achievement had multiple coefficients ranging from 0.26 to 0.80 for total achievement in socio-economically deprived rural sample and achievement in social studies and general science among the socio-economically high urban sample.

Group-II

Volume-III  
Abstract-423

RECIPROCITY AND GENEROSITY - SOME DETERMINANTS  
OF SHARING IN CHILDREN

(Author - Bhargava, P., Ph.D.Psy.,Luc.U., 1978)

The purpose of the present study was to determine the imitation of sharing behaviour in children as a function of model generosity and vicarious reinforcement. The hypotheses were: (i) Children who observed a very generous model sharing, would share more than those who observed a very stingy model. (ii) Subjects in the generous model and in the stingy model condition would imitate the marble distribution of the model. (iii) Vicarious reinforcement would affect the amount of sharing in generous and stingy model conditions. (iv) Different types of vicarious reinforcement would differentially affect the amount of sharing behaviour. (v) Significant differences on sharing would be revealed as a function of sex.

The subjects for the study were selected from two schools, Manav Bharati Vidya Mandir and Nari Shuksha Niketan, Lucknow. The sample consisting of sixty-four children, (thirty two males and thirty two females), ranging in age from five to seven years, was randomly assigned to a generous or a stingy model condition. Half the subjects in each group heard M praise herself, the others did not, and half of each of these groups heard E praise M, and the remaining subjects did not. Eight subjects (four males and four females) were assigned to each condition; each subject was later given an opportunity to share. The M was a 22-year-old female and the E was a 22-year-old female. The sharing was measured in terms of the number of marbles shared. The analysis of variance was used for analysing the data.

The findings were:

- (i) There was a strong effect of modeled behaviour upon subsequent sharing in children.
- (ii) Observation of a generous model could accentuate the altruistic behaviour in children.

- (iii) Children limited the model's performance because it was likened or identified with their parents, siblings' or others' behaviour at home.
- (iv) Vicarious reinforcement had no effect even within the experimental conditions.
- (v) Previous training was more effective than the verbal praise by a stranger given for a short time.

Group-II

Volume-III  
Abstract-451

THE STUDY OF EFFECTS OF FRUSTRATION ON  
PERSONALITY DEVELOPMENT

(Author - Dubey, P., Ph.D.Psy., Kum.U., 1980)

The study aimed at finding out:

- (i) statistical and scientific description of frustration and conflict,
- (ii) scientific discussion on frustration dynamics in personality development, and
- (iii) the relationship of frustration and some important aspects of personality structure, viz. intelligence, adjustment, attitude and motivational factors.

It was an experimental study of effects of frustration and was based upon observations. A sample of 400 male children from Class IV of different schools in the age group 8 to 10 years was randomly chosen in a game situation and tension was created in the individual to win the game. Four similar coloured round boxes (20x2) white and black wooden squares, a stop watch, a divided two sided table constituted the equipment used. An attitude scale was also used for collection of data. The two groups - successful (control group) and unsuccessful (experimental group) - were treated in the two tasks (A and B) in a counter-balancing way. Successful students were treated as the non-frustrated whereas the unsuccessful subjects were treated as the frustrated group. The motivation, conflict, displacement formation of attitude and adjustment were taken as dependent variables and were studied in a similar situation. A comparative study was made between the two groups in the two situations.

The findings were:

- (i) The frustrated individuals took more time than the successful group to select an alternative for them drive to draw wooden squares. A high degree of conflict existed.

- (ii) In the condition of frustration the level of motivation decreased. At a particular stage of frustration individuals left the game.
- (iii) Defence mechanisms were applied by these individuals to adjust themselves to the situation. Over confidence developed in the successful subjects. Projection, withdrawal, regression, displacement and compensation were the observed defence mechanisms.
- (iv) The frustrated individuals formed aggressive and other reactions against the game, the observer, the judgement and the winners. A negative attitude was formed among the frustrated, individuals.
- (v) Intelligent subjects, who were frustrated showed a high degree of conflict, more displacement and a low degree of motivation as compared to the normal frustrated group. There was greater effect of frustration among the intelligent group.
- (vi) The frustrated individuals were more affected by suggestions. Suggestions helped them in decreasing the degree of conflict.
- (vii) Frustration could become the cause for another motivation for the next drive to achieve success.
- (viii) During frustration, the subjects looked for suggestions that could positively affect them. Unsuccessful students did not accept suggestions.



PATTERNS OF PSYCHOLOGICAL PROBLEMS OF CHILDREN  
5-13 YEARS - THEIR ETIOLOGY AND SYMPTOMOLOGY

(Author - Kalra, N., Ph.D. Psy., Agr.H., 1979)

The research was undertaken to study the behavioural problems of children with a view to understand behavioural disorders and their social background. The following hypotheses were formulated (i) Faulty rearing practices were likely to cause deviation in the behavioural pattern of the child. (ii) An emotionally deprived child was prone to behavioural problems. (iii) Social and economic impoverishment may result in deviant behaviour. (iv) Organic deficiencies may lead to abnormal behaviour. (v) Age, sex and birth order as well as family size and structure may influence behavioural problems.

The study was confined to only those children who attended the child guidance clinic at S.N. Medical College, Agra. as many as 250 children from among the 512 cases who appeared in the clinic were studied; the age group was 5 to 13 years. Those who had behavioural problems due to physical deficiencies were excluded. The period of the study was two and a half years (July 1974 to December 1976). The study was conducted in two phases, the pilot study and the final study after consulting the clinical psychologists at the centre. The tools used in the study to measure behavioural problems were open-ended interview schedule and intelligence tests. Seguin Form Board, Bhatia's Battery of Performance Test and Vineland Social Maturity Scale were used for measuring intelligence.

The following were observed: (i) There were 176 boys and seventy-four girls among which 56.8 per cent were mentally retarded. (ii) The maximum number of children came from the families of businessmen followed by children of grade III employees. (iii) Faulty rearing practices resulted in habit disorders, speech defects, personality problems, sleep defects and psychosomatic problems. (iv) Emotional deprivation on the part of parents led to problems of personality, habit and anxiety state and, to a lesser extent, scholastic backwardness, psychosomatic problems and speech defects. (v) Socio-economic deficiencies of parents mainly resulted in problems of habit and sleep than to other behavioural problems. (vi) Organic deficiencies lead to various behaviour problems like scholastic backwardness, habit disorders, speech defects, feeding problems, and social

activities more than the other problems. (vii) Age showed significant difference, but other factors like sex, birth order, family size and structure did not reveal significant relationship with children's behaviour disorders.

(viii) Scholastic backwardness, habit disorders speech defects, personality problems and feeding problems were more prominent as compared to problems of sleep, psychosomatic, anti-social activities, anxiety, schizophrenia and functional fits. (ix) Organic deficiencies of children were the etiological factors of behaviour problems, next were faulty rearing practices, emotional depression, SES deficiencies of parents (in order). As a result of the scrutiny of etiological factors it was found that over-protection, rejection, strict discipline, lack of training led to faulty rearing practices; emotional deprivation was due to separation from parents, lack of affection and sibling partiality, socio-economic deficiencies due to maladjusted family, low economic condition and absence of recreational facilities, organic deficiencies were due to mental retardation and reaction to physical injury and ailments. Intelligence played an important part in determining different types of behaviour problems. (x) Anti-social behaviour and functional fits were observed in males, only. (xi) Children's behaviour problems never appeared alone but in clusters. Aggressiveness, rigidity, timidity and sensitiveness were common associated problems, common fears of darkness, animal sounds and persons were common with children. (xii) Birth order (first born), family size and structure, SES and parent's education did not play significant role in causing behaviour problems. (xiii) One cause could lead to various behaviour problem viz. over protection may lead to enuresis as well as delayed speech development.

Group - II

Volume III  
Abstract 541

THE EFFECTS OF DIFFERENTIAL PRE-TRAINING  
AND PRESENTATION METHODS ON CONCEPT FORMATION

(Author G.C. Rai, Ph.D.psy., BHU, 1968.)

This was an experimental study dealing with three parameters of concept formation, namely, the process by which concepts are formed, the effects of differential prior training on concept formation and the efficiencies of the modes of stimulus presentation in the formation of concepts. The investigation aimed at studying the relative effects of pre-training in absolute discrimination, relative discrimination and relative discrimination-cum-generalization on concept formation task with mode of response common materials in the two situations. The objective was to study the exclusive role of the commonness of the principle of response in the two situations.

The sample comprised 800 non-Telugu speaking male subjects of the age group 11+ to 15+ years studying in class VIII of local higher secondary schools. The study was based on a factorial randomized blocks design  $2 \times 4 \times 2$  with three variables - criteria in conceptual response, conditions of pre-training control, and methods of presentation of stimuli. Analysis of variance and t-test were used for data analysis.

The major findings were :

- (i) The criterion in conceptual response and the methods of presentation of stimuli produced significant main effects and not the pre-training variable. None of the interactions yielded any significant results.
- (ii) The groups of subjects who worked with Relational response pack performed significantly better than the corresponding groups of subjects who worked with Identical response pack.

- (iii) The performance of groups who were presented with the cards simultaneously was significantly better than that of the groups who were presented with the cards successively.
- (iv) The groups of subjects who were imparted pre-training in relative discrimination-cum-generalization, gave the best performance on the concept formation task. The second rank was assigned to those groups of subjects who were given pre-training in relative discrimination only. They were followed by those subjects who were given pre-training in absolute discrimination.

MORAL DEVELOPMENT IN CHILDREN

(Author-M. RANJ, Ph.D.Psy., All.U., 1968)

The objectives of the investigation were

- (i) to study the pattern of morality among children
- (ii) to analyse the developmental trends and some of the influences operating on the process.

The sample consisted of 350 children ranging from 6 to 11 years. The number of boys and girls was kept equal in the sample and they were separately divided into three age groups of 6 to 7 years, 8 to 9 years and 10 to 11 years. Half the students belonged to pango-vernacular schools and the other half to missionary schools. Coloured progressive Matrices, Moral insight test and personal data form developed by the investigator were used for collecting data. Central tendency, measures of dispersion, correlation, etc. were used for analysing the data.

The findings were :

- (i) Age was found to be an important variable influencing the knowledge of moral values. Knowledge of different moral values seemed to increase with an increase in age.
- (ii) The knowledge of various moral values did not seem to vary much in the two sexes.
- (iii) Children who did not get any moral instruction in school were in no way inferior in such knowledge to those receiving such instruction in school.
- (iv) A very similar pattern of moral values was found in the children of all the three age groups, negative value was comparatively more dominant in them.

- (v) Only at the age of ten to eleven years, boys and girls showed considerable variation in their pattern of different values. At the earlier ages, the differences were found to be quite negligible.
- (vi) Children receiving moral instruction in school showed a similar pattern of different values to that of those not receiving such instruction.
- (vii) The Mental ability of children did not considerably influence their knowledge of moral values, but its influence showed an increasing tendency with the maturity of the children.
- (viii) Respect was the most frequent moral value practised by most children in their everyday behaviour, closely associated with it were forgiveness and puniya (good deeds). Betrayal of faith, greed, anger and falsehood were some of the negative values which were quite frequent in their behaviour.
- (ix) Children, in the beginning, were quite immature and showed a clear emotional reaction for the different moral values but as they grew older, they showed maturity. Purity, punnya and respect were some of the positive moral values which received approval by most of the children. Greed was considered to be a shameful behaviour by them. Betrayal of faith gave them a feeling of guilt. Children generally showed a fearful reaction for most of the negative values.
- (x) Parents' influence in the acquisition and development of moral values in children was of vital significance; other important sources for such knowledge were teachers and books.
- (xi) The religious influence of the family did not contribute much to the acquisition of knowledge of moral values in children.

DEVELOPMENT OF PSYCHOLOGICAL SPACE PERCEPTION  
IN CHILDREN

(Author P. Shukla, Ph.D.Psy., All.U., 1973)

The primary aim of the study was to find out around what age development of pictorial depth perception begins to take place and to investigate some of the factors associated with better understanding of pictorial cues.

The study was conducted on children of three age groups ranging from three years to six and a half years. The three age groups were three to four years, four to five years and five to six and a half years. Both boys and girls were included in the sample. One hundred and twenty-five children of the desired age ranges were drawn randomly from a government nursery in Allahabad and a nursery in Delhi. They were from the middle socio-economic status families the CIE Individual Scale of Intelligence (1957) was used. A measure of space perception was developed. It consisted of six subtests, each having five photographic illustrations of pictorial depth cues. The following cues were utilized, linear perspective, relative size, superimposition, texture serial perspective and shading. Apart from these five cues, a group of five photographs depicted multiple cues, i.e. more than one cue was presented on each photograph of the multiple cues subtest. The data were analysed with the help of the Mann-Whitney U test, Kruskal-Wallis one-way analysis of variance, t-test, product moment correlations, rank correlations and partial correlations.

The findings were ;

- (i) Sex differences in pictorial space perception were not found to be statistically significant.
- (ii) The mean space perception scores of different age groups demonstrated a clear developmental trend.
- (iii) Intelligence was found to be highly correlated with space perception. The partial correlation revealed that deprivation had deleterious effects on space perception when intelligence was controlled.

- (iv) No ill-effects of deprivation were found in the lowest age group. Perceptual skill had not developed to any appreciable degree in the lowest age group, but in the two higher age groups the mean space perception scores of the deprived children were significantly lower than the mean scores of the normal children.
- (v) From the comparison of the mean scores of each subtest, it was evident that some of the cues were acquired earlier than the others. In the lower age group scores did not differ but with the increasing age, the children had acquired the necessary skill to utilize some of the cues.
- (vi) The pattern of cue emergence was more or less similar for the deprived group and the normal
- (vii) Perspective guided children's judgements of big and small even in the youngest age group. But at the same age level, the perspective could not help them in discriminating the far from the near i.e. distance.



Group-II

Vol.III  
Abstract-578

# A DEVELOPMENTAL STUDY OF FEARS IN CHILDREN

( Author- U.R. SIDANA., Ph.D., Ali U., 1971 )

The study aimed at finding out the influence of age, sex, intelligence, the socio-economic status of the family and certain child rearing practices of parents on the development of fear in children.

The sample consisted of 500 children from five primary schools of Kanpur. The following tools were used for data collection: Fear Check Lists Draw-A-Man-Test, Socio-economic status scale and parent's inventory. The means, standard deviation and t-rates at were compared.

The findings of the study were (i) A Statistically significant differences existed between the fear of a six year old child and then of a eight year old child existed. (ii) There was a high degree of similarity in the rank order of the most frequent fear responses of the children of the three age groups. (iii) Girls had significantly more fear than boys on the pooled sample. (iv) The low intelligence group of children had the highest mean fear score as compared to the middle and the high intelligence groups. (v) The children of the lower socio-economic group had higher total mean fear score than the children of the other two groups of socio-economic status. (vi) The fears of the older group were more affected by the parental acceptance and rejection than the fear of the younger group. (vii) The fear of the six year and the then ten year age groups were affected by the parent reward and punishment.



A STUDY OF SELF CONCEPT LEVEL OF ASPIRATION AND INTERESTS AMONG PREADOLESCENTS OF VARIOUS SOCIO ECONOMIC GROUPS,

( Author- P. Tara., BHU, 1980)

The present investigation aimed at the studying the influence of socio-economic status on three aspects of personality, namely, self concept, the level of aspiration and interest at the preadolescent stage. Seven hypotheses had been postulated and tested, three of which were directed to studying self concept, the level of aspiration and interests with reference to the socio-economic status while the fourth made a correlational study of the three aspects of personality. The remaining made a comparative study where self-concept, the level of aspiration and interests had been compared sexwise and on the basis of urban/rural areas.

A sample of 1000 students (500 boys and 500 girls) of classes V and VI representing urban and rural areas of Varanasi district was drawn on the basis of purposive sampling technique. The tools used in the study were the Hindi adaptation of Piers-Harvie Childrens' Self-concept Scale, the L.A. Coding Test interest Record developed by (Singh), Kuppuswamy's socio-Economic Status Scale (urban) and Personal Data scheduled developed by the investigators. Both parametric and non-parametric statistical techniques and tests such as t-test, biserial correlations, tetrachoric correlation, chi-square were used to analyse the data.

Important findings were (i) Self-concept scores rose with the socio-economic status and its aspects such as the level of parental education, parental income and the level of parental profession (ii) A significant positive relationship was noticed between parental occupation, parents' education, monthly income of father and the level of aspiration. (iii) Socio-economic status affected the vocational interests of children (iv) Negligible relationship existed between self-concept the level of aspiration and interests at the preadolescent stage. (v) Boys showed significantly superior scores in comparison to girls on various measures of self-concept such as behaviour.

intellectual and school status and physical appearance and attributes, with the sole exception of popularity where the two groups were similar.

(vi) On various measures of self-concept, urban and rural children showed that the two groups were similar with the only exception on popularity where the urban children scored significantly higher than their rural counterparts. (vii) Boys and girls showed some differences on their aspiration level as boys scored higher on G.D. scores than girls.

(viii) Rural and urban differences with regard to aspiration level of children were negligible.

(ix) Sex differences were found in four out of the seven areas of interests. Boys scored significantly higher than girls in mechanical and scientific interest areas while girls scored higher in aesthetic and social interests. (x) There was a significant impact of the place of living (urban/rural) on all the measures of interest. The urban children scored higher than their rural counterparts on scientific, aesthetic and clerical interests while the rural children outscored the urban children on the other measures of interest areas such as mechanical, business, social and outdoor ones.

Group-II

Vol.III  
Abstract 617

EMOTIONAL FACTORS IN PROBLEM CHILDREN IN THE AGE-  
GROUP OF SEVEN TO TWELVE YEARS.

(Author- R.K., Yadav, Agra U., 1980)

The investigation attempted to (i) to assess the actual conditions in which the problem children lived and behaved, (ii) to know the important factors responsible for the behaviour disorders, and (iii) to suggest some remedial measures. The possible factors studied were emotionality, environmental conditions like uncogential family condition, rejection by parents, quarrels between parents, separation, from one or both in parents separation of parents, poverty, number of children in the family, or neighbourhood. The study formulated the following hypotheses (i) Uncogential family conditions lead to problem behaviour (ii) Rejection by parents is a cause of problem behaviour (iii) Quarrels and incompatibility between the parents is a cause of problem behaviour. (iv) Separation from one or both the parents developed problem behaviour (v) Poverty is a cause of problem behaviour (vi) The number of children is related to problem of behaviour. (vii) Neighbourhood is a definite factor in the problem of behaviour.

The study used the social survey method by taking a purposive sample. The tools used were the Depression Scale, adjustment inventory and questionnaires for getting information pertaining to the family's condition and other relevant information about the child. The results of the study were:-(i) The problem behaviour was frequent among the children of the age-group seven to twelve years when and carelessness caused problems of adjustment (ii) The children indulged in all types of misbehaviours from sexual immorality to stealing and use of obscene language. Truancy was of highest frequency. (iii) Among the factors responsible for this type of behaviour were family conditions like the separation of parents, low income and low education. (iv) The highest percentage of problem children was found among the business class of society. Nuclear families had greater number of problem children than joint families. The main

reasons was attributed to father not having time to look after the children and therefore the children felt rejected. (v) Harsh treatment by parents and strict discipline led to maladjustment as against pampering. Tension and quarrels on money matters as well as on domestic work contributed to the problem behaviour. (vi) Home environment and drinking, smoking and gambling by parents also contributed to problem behaviour among children. (vii) The size of the family, and the number of children in the family had serious effects on the character of the children. Housing problem (shortage of accommodation) also gave rise to the problem behaviour. (viii) Living standard and caste prejudice proved a factor in the development of problem behaviour. (ix) The children had little interest in school, loitered, did not want to go to school and instead visited hotels, cinema houses or stayed at home and read cheap novels. The games were also low and cheap like playing with marbles, gullidanda. (x) The types of friends also played an important role in developing problematic behaviour. (ix) The problem children were those who misbehaved but were not subjected to legal punishment.

A STUDY OF EDUCATIONAL BACKWARDNESS IN SCIENCE  
AND MATHEMATICS AT DELTA LEVEL IN VARANASI  
DISTRICTS.,

(Author- C.P. Mishra-. BHU., 1977)

Objectives of the study were (i) to study the extent and nature of educational backwardness in science and mathematics among the students of class VIII, (ii), to find out the differences between the attainment in science and mathematics of class VIII students on the basis of urban and rural areas and boys and girls (iii) to locate the factors that operated together or singly in causing educational backwardness, and (iv) to find out how far a lower level of intelligence accounted for educational backwardness and what extraneous factors were responsible for it.

A sample of 1060 class VIII students was randomly drawn from seventeen institutions of Varanasi district to represent both the sexes and rural urban institutions. The tools used in the study were an achievement test of science, an achievement test of mathematics, a test of general intelligence. In addition to these standardized tools the researchers prepared and Teachers' opinion form, students' self inventory and Teachers' Information Blank. The data were analysed by employing percentage, mean, standard deviation, critical ratio and product moment correlation.

The findings were:-

(i) In all 23.58 per cent students were educationally backward in science and mathematics. Out of the total backward cases 63.8 percent showed marked deficiency in one subject and 36.8 percent showed backwardness in both the subjects (ii) The general level of achievement in mathematics was almost the same among boys and girls both in urban and rural areas, however, backwardness, in science was more marked in the rural areas than in the urban. (iii) Inferior intellectual potentiality was the most important cause of educational backwardness. The percentage of dull and mentally deficient was 54.4. and 17.2. respectively.

(iv) Differences in percentage of attainment, sexwise and rural/urban areas wise, were not statistically significant. (v) Socio-economic factors were associated with educational attainment. Educational attainment was significantly negatively related with family size ( $r = -0.44$ ) positively with parent education ( $r = 0.45$ ) and hierarchy of father's occupation ( $r = 0.48$ ). (vi) Various factors affecting students attainment were clubbed into different clusters. The first cluster represented low ability and negative attitude towards studies.



PREPARATION OF IMPROVISED AND LOW COST EDUCATIONAL  
TEACHING AIDS WITH THE HELP OF WASTE MATERIALS

( Author- N.K. Srivastava and H.C. Kaushik)

The objectives were (i) to prepare teaching aids through waste materials available in the environment(ii) to make teachers aware of the importance of waste materials in the environment and (iii) to provide a better education in an economised way.

The study was limited to the teaching aids for the primary and upper primary schools from waste material available in the environment of Rajasthan. Entire Rajasthan was divided into six geographical regions from where the waste materials were collected. An exhibition of the teaching aids thus prepared was arranged while 100 primary and upper primary school teachers were invited and asked to give their opinion about the aids and suggestions for their improvement, however, only eighty two responded. The responses were collected on a questionnaire prepared for the purpose. Most of the aids were meant to teach science and mathematics.

The results indicated (i) As regards availability of materials in the villages, 68.29 percent claimed they were not available, 4.88 percent felt very few were available while 26.93 percent felt some of the materials were available (ii) Though 26.83 teachers felt they required technical help in the preparation of similar teaching aids, 48.78 percent felt they required some such help while 24.39 percent required no help. (iii) Though 59.76 percent respondents expressed their desire to prepare the teaching aids in the extracurriculars, 34.15 preferred preparing them in the vacant periods while 6.09 percent could not propose a definite time for their preparation (iv) The prepared aids were considered very helpful for class teaching by 57.32 percent teachers, of some use by 28.04 percent and of hardly any use in classroom teaching by 14.63 percent. (v) All teachers considered the aids of low cost as compared to the commercially prepared ones. (vi) Along with the students and community, 68.29 percent teachers felt they could prepare such teaching aids while 14.63 percent teachers felt they could prepare such teaching aids while 14.63 percent

teachers felt they could prepare them alongwith the students; 10.98 felt they could be prepared by students and the community.(vii) The teachers felt a write-up of all the aids should be provided to the primary and upper primary teachers; the aids should be categorised according to class and subject.

1990

Group-III

Volume-III  
Abstract-857

A COMPARATIVE STUDY OF THE ANALYTICAL AND  
SYNTHETICAL APPROACHES TO THE TEACHING OF  
READING ELEMENTARY HINDI

(Author-GCPI, Allahabad, 1981.)

The objectives of the study were

- (i) to compare the reading efficiency of the students studying the two Hindi textbooks, namely Bhasha Deep Part I and Gyan Bharati Part I through the analytical and synthetical approaches, and
- (ii) to study the effectiveness of these two textbooks of Hindi and to suggest measures to improve them.

This experimental study followed a randomized experimental-control group design. Twenty students of grade I, studying in a primary school in Allahabad city constituted the sample of the study, they were divided into two groups of ten each, comparable on intelligence. One of these groups was taught reading of the two Hindi textbooks, namely, the Bhasha Deep Part I and the Gyan Bharati Part I through the synthetical method of teaching reading whereas the other group was taught similar content from the same textbooks through the analytical method of teaching reading. The experiment continued for three weeks. After the completion of the contents, the reading efficiency of the students of both the groups was tested on the basis of certain criteria, viz., the correctness in pronouncing the alphabets, words and sentences, fluency in reading the words and sentences.

and correct writing. In order to compare the effectiveness of the two methods, the averages and percentages were calculated.

The findings of the study were :

- (i) The analytical approach proved significantly more effective in teaching the reading of alphabets and of writing than the synthetical approach.
- (ii) The synthetical approach proved significantly more effective in the teaching of reading of words and in reading the sentences than the analytical approach.
- (iii) Both the approaches proved equally effective in teaching writing efficiency as regards words and sentences.
- (iv) The Bhasha Deep, designed on the basis of the analytical method of teaching, proved to be significantly more effective than the Gyan Bharati, from the point of view of improving reading ability.

Group - II

Volume-III  
Abstract-858

A DIAGNOSTIC STUDY OF THE ERRORS COMMITTED  
BY THE STUDENTS OF GRADE VI IN ORAL READING  
OF HINDI LANGUAGE AND THE REMEDIAL MEASURES  
TO IMPROVE UPON THEM

(Author-GCPT, Allahabad, 1981.)

The main purpose of the investigation was to diagnostically study the errors committed by grade VI students in oral reading of Hindi language and to suggest possible remedial measures so as to improve upon the errors.

The sample of the study consisted of ten students of grade VI, who had scored very low in the oral reading examination. The data were collected with the help of records of the students scores in half-yearly examination, eight remedial test papers for different stages and appendices from the textbooks for grades III, IV, V and VI which included content for all ability levels. The students' oral reading ability was tested on the basis of results of tests for speed, fluency, punctuation, pronunciation, meaning, emphasis and stress, accent, and the like.

The findings of the study were :

- (i) Twenty percent of the students had oral reading ability equivalent to those of grade V; ten percent students had the oral reading ability equivalent to those of grade IV; and rest of them (seventy percent) oral reading ability equivalent to the students of grade VI.
- (ii) No complexity was found in the use of the refined tests.



A STUDY OF THE RELATIVE EFFECTIVENESS OF DIFFERENT  
STYLES OF PROGRAMMED LEARNING IN HINDI GRAMMAR

(Author-G. C. PACHAURI, Ph. D. Edu., Mee., U., 1979)

Objectives of the study were

- (i) to study the relative effectiveness of the linear, branching, hybrid and skip styles of programmed learning in respect of grade VII students' achievement in Sandhi (Hindi grammar) and
- (ii) to study the interaction effects of sex difference amongst the learning outcomes when grade VII students were taught Sandhi by linear, branching, hybrid and skip styles of programmed learning material.

The hypotheses formulated were

- (i) there was significant difference between the relative effectiveness of linear, branching, hybrid and skip styles of programmed material when grade VII students were taught Sandhi by them and
- (ii) there was significant sex difference amongst the relative effectiveness of linear, branching, hybrid and skip styles of programmed learning material when grade VII students were taught Sandhi by them. The sample consisted of 400 students of Saharanpur. The study used achievement test in Sandhi as pretest and posttest. The study applied the techniques of F-test and analysis of covariance.

The findings were :

- (i) Linear styles of programmed learning material was most effective for learning Sandhi in Hindi grammar by grade VII students.
- (ii) There was no interaction effect of sex on the achievement of students when they were taught by linear and skip, linear and hybrid, linear and branching, skip and branching and hybrid and branching styles of programmed learning.

- (iii) Interaction effect of sex was observed when students were taught by skip and hybrid styles of programmed learning.
- (iv) The differences between mean achievements of adjusted scores of boys and also of girls of all the programmed learning material were significant.
- (v) The differences between mean achievements of adjusted scores of boys and girls were significant when they were taught by hybrid and skip styles of programmed learning.
- (vi) The differences between mean achievements of adjusted scores of boys and girls were not significant when they were taught by linear and branching styles of programmed learning.



Group-II

Volume-I  
Abstract-249

# NON-LANGUAGE TEST OF VERBAL INTELLIGENCE

(Author - Chatterji, S and Mukherjee M., ISI, Cal., 1967)

The study aimed at developing a test which would measure verbal ability through a nonlanguage or language fair medium. It was hypothesised that such a nonlanguage test may meet the dual challenge of language and accurate prediction.

In the beginning, the pilot study was carried out. A small test of fiftyfive items consisting of three parts, viz., similarity, classification and picture series was constructed in a nonlanguage form. With this nonlanguage test, test of abstract reasoning and test of verbal reasoning were also included. The test was administered to about 1075 students of class VIII belonging to thirteen different schools of Calcutta. The reliability coefficient (K.R. formula 21) of this pilot study was .82 and validity coefficient was as high as .39 even at the stage of development. As a result of the pilot study, experimental form with large number of items was prepared and tried out. This experimental version consisted of four parts, viz., classification, opposites, analogy and picture arrangement. The experimental form was administered on 500 students of class VIII in different schools of Calcutta situated in different areas. Two other tests which were used in the pilot study were also used this time. Mean and standard deviation for each part of the test were calculated separately for boys and girls. There was no significant difference between the two sexes. The intercorrelations between the different parts of the test were round about .52. The reliability coefficient for the total test score was .91 (K.R. formula 21). The validity coefficients of the part and total scores on the test calculated against total school examination marks ranged from .22 to .40 with a median of .28. On the basis of the scores obtained by the candidates on the three tests, viz., the non-language test of verbal intelligence (NLTVI), the test of verbal reasoning (VR) and revised test of abstract reasoning (AR), the three stages of item analysis as done in the pilot study were repeated. The difficulty and discrimination values were obtained with NLTVI scores. Validity coefficients were obtained on the basis of the selected items of NLTVI. The experimental form was revised.

The values of revised NLTVI held great predictive value specially for the science groups. This was also true for the girls' humanities group, while the obtained validity coefficients for the boys' humanities and commerce groups were of much lower order. The revised items were arranged on the basis of their difficulty values separately for the four parts of the NLTVI. The final test was administered on the students of class VIII of randomly selected three boys' and three girls' schools of Calcutta which had Bengali as the medium of instruction. The total time taken was fortyfive minutes. The intercorrelations among the NLTVI part scores were calculated along with means and standard deviations.

The values of intercorrelations between parts of the test were significant at .01 level. The reliability coefficients (K.R. formula 21) were .64, .69, .76, and .79 for all the four parts of the test. The regional norms were developed on the basis of data collected. The validity coefficients were calculated against the total annual school examination marks. They ranged from .22 to .64 with a median of .38. All the obtained coefficients were significantly different from zero.

Group-II

Volume-I  
Abstract-269

CONSTRUCTION AND STANDARDISATION OF A  
DIFFERENTIAL APTITUDE TEST BATTERY

(Author - Mukherjee, M., D.Phil.Psy., Cal. U., 1966)

The study was an attempt to construct a differential aptitude test battery.

The battery consisted of seven subtests, viz., English usage, clerical aptitude, mathematics knowledge and aptitude, scientific knowledge and aptitude, mechanical comprehension, verbal reasoning and abstract reasoning. After following all the usual procedures, the test was standardised on a sample of 2000 students of class VIII.

A follow-up study for the same group was done. The multiple correlation coefficient between aptitude scores and the higher secondary marks was found as high as .70. The reliability and validity data revealed that the test was highly reliable and valid.



GROUP II

VOLUME II  
ABSTRACT-76

A PSYCHOLOGICAL STUDY OF INTELLIGENCE OF  
TRIBAL AND NON-TRIBAL CHILDREN OF TRIPURA,  
D. PHIL. PSY. CAL. U., 1961.

(Author: N. Chattopadhyay)

The main objective of the study was to compare the intelligence of tribal and nontribal boys of school going age in Tripura measured through a battery of performance tests.

The total sample for the study consisted of 500 tribal and 500 nontribal children from different subdivisions of Tripura. With the age ranging from 11+ to 15+ the sample was subdivided into five age groups each of 100 in both tribal and nontribal samples. The purpose of taking five age groups was to see whether achievement changed with age. The children were studying mostly in classes V through VIII. The battery of performance tests included the Alexander's Passalong Test, the Koh's Block Design Test, and the Dearborn's Form Board Test, along with the adaptations of the Cattell's Memory Test and the Bhatia's Picture Test duly modified to make them suitable for Tripura conditions. The data were analysed by computing means, SD, percentiles, and standard scores. Analysis of variance and factor analysis were also utilised for statistical treatment of the data.

The following were some of the salient findings of the study: The tribal boys did not compare favourably as a group with the nontribal boys. (ii) Both the groups were generally backward in Tripura. (iii) Consistently higher score by tribal boys only on the Alexander's Passalong Test showed that the problem solving situation posed by this test might be more akin to the real life environment of the tribal boys than that of the nontribal boys. (iv) Only one significant factor, which might be considered to be of the nature of 'g' was obtained by factor analysis. However, the common elements accounting for the same factor in both the groups might consist of some common specific factors in addition to the general factor 'g' running through the tests.



GROUP II

VOLUME II  
ABSTRACT-200

LEARNING DISABILITIES IN ALGEBRA -  
DIAGNOSIS AND PREVENTION, PH.D. EDU.,  
VISVA BHARATHI U., 1977.

(Author: D. Bhattacharya)

The important objectives of the study were (i) to diagnose the detailed patterns of disabilities of the students in specific areas of algebra with the help of specially designed tools; and (ii) to try out, experimentally, the teaching methods which would prevent development of learning disabilities in those areas.

The stratified sample consisted of slow-learners, both boys and girls of class VIII, numbering 238 in case of 'addition' and 252 in case of 'multiplication'. Diagnostic tests in 'addition' and in 'multiplication' were developed. The test-retest reliability coefficients for tests in 'addition' and 'multiplication' were 0.96 and 0.94 respectively. The extent of disabilities found by structured interview of twenty percent randomly selected students was related with the disabilities found by tests. The coefficients were 0.94 and 0.95 respectively in 'addition' and 'multiplication'. The patterns of disabilities were found to be fifty-nine in case of 'addition' and thirty-seven in case of 'multiplication'. The preventive measures developed and which involved teaching through audio-visual methods, were tried out by having control groups and experimental groups in four different schools. The same teacher taught the four groups and the developed diagnostic tools were used as post-tests.

The developed audio-visual method of teaching was found to be effective. It was noticed that it also helped in motivation and retention.





GROUP II

VOLUME II  
ABSTRACT-205

THE LANGUAGE DEVELOPMENT OF NURSERY AND  
PRIMARY SCHOOL CHILDREN, D. PHIL.PSY.,  
CAL. U., 1971.

(Author: S.K. Chattopadhyay)

The objectives were to find out the developmental problems relating to nine different aspects of language skill of nursery and primary school children of West Bengal. Efforts were also made to know whether differences due to rural and urban areas and differences due to sex had any impact on the development of language skill.

The sample consisted of 600 children, in the age range of four to ten years, belonging to nursery and primary schools, situated in rural and urban areas of West Bengal. The criteria for selecting the subjects for the study were intelligence and physical fitness. Out of the 600 children, 300 were chosen from rural areas and 300 from urban areas. Material used in the study consisted of Language Development Items (LDI) prepared by the investigator. The LDI had items corresponding to nine different aspects of language skills, namely, skill in hand writing, skill in reading, immediate span of verbal consciousness, mean length of verbal response, sense of directional languages, sense of language regarding simple arithmetic, nature of sentence, story telling capacity through pictures, and sense of language regarding causal relations.

The findings were as follows: (i) The nine aspects of language skill included in the study had a close relationship with grade levels as the scores on LDI increased consistently with increase in grade. (ii) It could be stated that language skill was directly related to age and hence to maturation. (iii) In the general trend of gradual development from the lowest grade (grade I) to the highest one (grade VI), it was found that development in grade II in comparison to grade I as well as in grade VI in comparison to grade V was not so

much pronounced in some of the language aspects. (iv) Language development in grade V was found much accelerated in comparison to grade IV. (v) It was found that girls did not excel boys in most of the grades; and the differences in scores due to difference in sex were not significant. (vi) Urban children were in a better position than the rural ones so far as language development was concerned. (vii) Regarding language development, children of educated parents were better than the children of less educated ones.

GROUP II

VOLUME II  
ABSTRACT-318

ADAPTATION AND STANDARDIZATION OF THE  
HOLZINGER-CROWDER UNI-FACTOR TESTS,  
D. PHIL. PSY., CAL. U., 1967.

(Author: S.K. Datta)

The purpose of the study was to adapt and standardize the Holzinger-Crowder Uni-Factor Tests (1952-53) into Bengali language.

The tests were nine in number. These tests measured four factors, viz., Verbal, Spatial, Numerical and Reasoning. The test scores on verbal, numerical and reasoning factors yielded scholastic aptitude scores. Pre-tryout was carried out on a sample of fifty students of grade VIII. The sample for standardization testing consisted of 314 boys and 106 girls from twelve schools of Tripura. Item analysis was done.

The index of internal consistency of the tests ranged from 0.56 to 0.89. The coefficient of validity by means of multiple group method was found to be 0.62 (N=400). Percentile rank and standard scores were calculated for all the tests.



GROUP II

VOLUME II  
ABSTRACT-390

TEACHING BENGALI AS A SECOND LANGUAGE  
IN ANGLO-INDIAN SCHOOLS IN WEST BENGAL,  
DEPT. OF COMPARATIVE PHILOLOGY AND  
LINGUISTICS, CAL. U., 1976. (NCERT FINANCED)

(Author: S. Chatterjee)

The task of linguistic analysis was undertaken because no standard work on these lines was available in Bengali. This project was undertaken on the basis of samples collected both of written and spoken Bengali for the purpose of selecting structural patterns for incorporating them in the lesson materials. The actual needs of the learners, from classes II to VI, and the different levels of Bengali - morphology, vocabulary, syntax and phonology, were determined.

Graded materials were prepared. In preparing the graded materials, a compromise had to be made between the principle of ease of learning of the children and the structural approach.



GROUP II

VOLUME II  
ABSTRACT-528

DEVELOPMENT OF A SUITABLE TEST FOR PREDICTING  
SUCCESS OF THE SCHOOL STUDENTS IN DIFFERENT  
ACADEMIC STREAMS, D. PHIL. PSY., CAL. U., 1974.

(Author: P.K. Chakrabarti)

The purpose of the study was to develop a suitable test in Bengali for use in predicting the probable success of students in the different academic streams: Humanities, Science, Commerce and Technical (Engineering).

The sample, for tryout, included 389 students who had passed the annual examination of class VIII. In the final standardisation, the sample consisted of 986 students including 282 boys and 231 girls from urban schools and 243 boys and 230 girls from rural schools. The test, developed in the final form, was an objective, paper-pencil and structured group test containing mostly recognition type of items. There were thirteen subtests presented in two booklets. Booklet I contained seven subtests, namely, (i) Science knowledge, (ii) Science problem, (iii) Comprehension of technical narrations, (iv) Technical problems, (v) Comprehension of commercial narrations, (vi) Computation, and (vii) Arithmetic problem. Booklet II included six subtests: (i) Synonym, (ii) Antonym, (iii) Commerce knowledge, (iv) Comprehension of mathematical principles, (v) Directed composition, and (vi) Understanding space and forms.

The coefficients of reliability found by split-half method and test-retest method ranged from 0.68 to 0.90 and 0.69 to 0.96 respectively. The validity of the test was studied subtestwise in different ways. It was validated against three sets of school examination marks obtained in (i) half yearly examination of class IX, (ii) annual examination of class IX. Validity of the test was also studied by computing correlation of subtest scores with the marks obtained by 190 students studying in class XI who were adjudged as good students in their respective streams based on their examination results and their teachers' ratings. Two types of norms - percentile ranks and standard scores - were established. In order to study the nature of belongingness of the subtests, beta coefficients (coefficients of belongingness) were computed.





AN ENQUIRY INTO THE ADMINISTRATION OF PRIMARY  
EDUCATION IN BENGAL UNDER MONTAGU- CHELMSFORD  
REFORMS AND ITS BEARING UPON THE SAME IN THE  
POST INDEPENDENCE WEST BENGAL-

( Author- PURKAIT., B.R., Cal. U., 1981 )

The objectives of the study were (i) to find out the causes of backwardness of primary education in undivided Bengal between the two world wars (ii) to highlight the real motive of the British Government to arrest the progress of mass education in the lame pretext of inadequate finance, (iii) to ascertain the fact that administrative lacuna, financial stringency, apathy and indifferent attitudes of the colonial government in pre-independence days formed the real hinderances in the way of rapid expansion of elementary education in Bengal and (iv) to determine the ways and means conducive to the development of elementary education in undivided Bengal, particularly West Bengal.

It was mainly a historical survey type study utilizing both private and public records such as annual and quinquennial reports, surveys, educational years books legislative enactments, gazettes, histories, biographies, government and municipal resolutions, private and public letters, periodicals, magazines and newspapers as source materials.

Important findings were:- (i) the provincial government was dependent upon the central government for financial assistance. (ii) The local self-governing bodies, on the other hand, were dependent on the provincial government for financial support (iii) Under the Montford reforms the public utility services including education were transferred subjects which were financially starved. (iv) There was a constant controversy both in the press and on the platform regarding cess and taxation for the purpose of education. (v) the Centre province financial

financial arrangement was most unsatisfactory and unacceptable to the provinces.(vi) The Montford Reforms were followed by an uneven and uncertain distribution of financial resources between the centre and the provinces(vii) In spite of several attempts through different legislative enactments primary education could not be made free, universal and compulsory(viii) The government at the centre as well as in the provinces had intentionally avoided the financial responsibility for mass education.(ix) In Bengal, tuition fees met a high percentage of the educational expenditure(x) Police expenditure superseded educational expenditure.(xi) Primary education had been at the mercy of the bureaucracy.(xii) Wide disparity in respect of educational opportunities had always existed between towns and villages(xiii) There was an unending controversy between the voluntary system and the compulsory system.

Group-II

Volume-III  
Abstract-111

INTERPERSONAL RELATIONSHIP IN CLASSROOM  
SITUATION AS REFLECTED ON SOCIAL DESIRABILITY  
SCALE

(Biswas, C., Ph.D.Psy., Cal.U., 1977)

The main purpose of the study was to examine social desirability correlates of interpersonal relationship in classroom situation. Sociometric Questionnaire and Social Desirability Scale were developed. In developing the Sociometric Questionnaire friendship criterion was used. Social Desirability Scale included forty-two true-false items, which were selected on the basis of item analysis and expert decision. These items had to meet four different criteria. The sample was drawn from fourteen class VIII sections of ten higher secondary schools of the urban area of Agartala. The sample size, present in both the testing situation, was 405 (187 boys and 218 girls).

The findings of the study were: (i) Social behaviour was one of the determining factors of social acceptance. (ii) Social behaviour determined one's ability to maintain stable friendship relations with others. (iii) Extreme fluctuation groups appreciably differed in the amount of socially desirable characteristics. But the adjacent friendship fluctuation groups did not show statistically significant differences in social desirability scores. (iv) High social acceptance increased stability in friendship relations, while low social acceptance decreased such stability. (v) Social desirability characteristics contributed to the interaction process in a group and determined social acceptability and friendship relations of the individuals in a group. (vi) There was sufficient relationship between sociometric choice status and social desirability. Friendship fluctuation and social desirability were inversely related. Sociometric choice status (or social acceptance) was inversely related to friendship fluctuation. (vii) Sociometric choice status over sixteen weeks period was stable. Both high and low choice status groups (except the isolated) showed maximum stability. (viii) The internal consistency reliability coefficient of the social desirability scale was 0.69.



STUDY OF THE PROBLEM OF GIRLS' EDUCATION IN  
SELECTED DISTRICT OF WEST BENGAL.

(Author - Dutt, S., IEW, Cal., 1979)

The pilot study aimed at finding out the actual causes of backwardness in girls' education in a district of West Bengal, Purulia, the most backward district was selected. Initially, an appraisal of the existing conditions of the primary education of girls in the age group 6-11 years was undertaken.

The findings of the study were: (i) Between 1970-71 and 1973-74 the enrolment of girls in the age group 6-11 years increased by 15 per cent. (ii) As many as 66 per cent dropped out between Classes I and IV and 75 per cent between Classes II and V. (iii) Eighty per cent of the guardians stated that providing girls with training in domestic work was their only responsibility. (iv) Thirty per cent felt the family or society were not losers if girls were not given education. (v) In poor families, 68 per cent felt it was unthinkable to send girls to school. (vi) Fifty-eight per cent gave lack of individual attention as the reason for not sending their daughters to school. (vii) The proposal for rapid expansion of girls' education in the country was supported by 98 per cent. (viii) Poverty, negligence of parents and involvement in domestic work were the main hindrances in the way of education of girls. (ix) According to the primary school teachers, 85 per cent parents and guardians were irresponsible towards girls' education. (x) Seventy-five per cent of parents felt that making arrangements for their marriages were their only responsibility. (xi) Poverty and consequently lack of clothes were cited by 65 per cent teachers as a reason for not sending the girls. (xii) Fifty-four per cent felt parents were eager to take them out of school even if they failed once. (xiii) Eighty per cent of the local community felt on equal proportion of boys and girls was sent to school while 96 per cent felt they were more interested in the boys' education. (xiv) Eighty per cent of the community were considered having a favourable attitude towards education. (xv) Important reasons given as obstacles in the proper management of schools were paucity of funds, condition of the school building and shortage of teachers, in a descending order.



Group-II

Volume-III  
Abstract-144

ROLE OF LADY TEACHERS IN THE UNIVERSALIZATION  
OF PRIMARY EDUCATION IN THE DISTRICTS OF WEST  
BENGAL

(Author - Gupta, L., Cal., 1979)

The objective of the study was to find out the aspects in which women teachers were better than their male counterparts. From the 24 Parganas and Calcutta, opinions of 108 male and 64 female teachers, ratings of 400 children from Classes III and IV and opinions of 48 guardians were collected. The three questionnaires prepared for collecting data were (i) on the basis of attitude towards teaching and teacher traits to elicit opinions from teachers (ii) for pupils' opinion regarding attitude and traits of teachers towards teaching and (iii) for guardians' opinions regarding attitude and traits of respective teachers. Equivalent weightage for students' responses was calculated as the sample of male teachers was smaller.

The findings of the study were: (i) Women teachers were liked more by children. (ii) Women teachers fostered good habits and cleanliness among the pupils. (iii) The voice of women teachers was more distinct and impressive. (iv) More help was provided by women teachers inside as well as outside the school. (v) As regards individual attention, women teachers did not discriminate between high and low achievers. (vi) Greater inspiration was provided by women teachers to develop potential traits for attaining ambitions. (vii) Women and men teachers mixed equally freely with the pupils. (viii) Teaching by men and women teachers was equally effective. (ix) Men teachers were more humorous and their classes more lively. (x) Though more inspiration for participating in co-curricular activities was provided by women teachers their counterparts took greater interest in games and outdoor activities and also school administration.





COST OF ELEMENTARY EDUCATION IN WEST BENGAL:  
A SAMPLE SURVEY

(Author - Bose, P.K., Banerjee, P.K. & Mukherjee,  
S.P., Dept. of Stat., Cal. U., 1975)

The objective of the present investigation was to determine components and differentials of the unit cost of elementary education in West Bengal as also to study the trend as shown in the recent past.

Figures for recurring expenses on items like maintenance of physical facilities and teaching accessories but excepting teachers' salaries from the selected sample of schools and data on teachers' salary pertaining to all government financed (partly or wholly) elementary schools were compiled. The average teacher cost was calculated for the four years from 1969-70 to 1972-73, while the average recurring cost per student on all other items was found out only for the two years 1969-70 and 1973-74. In all, 1375 primary and 213 junior basic schools were covered. A questionnaire was used which included items regarding recurring and non-recurring expenses on such heads as teachers, non-teaching staff, building, library, extra-curricular activities, teaching aids and accessories, and establishment in relation to student enrolment, etc.

The study revealed that the average recurring cost per student on non-teacher items was not much and had not shown any remarkable increase over the years. The average total recurring expenditure per student in an elementary school in West Bengal was Rs. 57.08 and Rs. 51.75 among the schools in Calcutta and in the remaining schools during 1969-70. It rose to Rs. 62.07 and Rs. 59.92, respectively, during 1972-73. The investment on elementary education in West Bengal was very much unsatisfactory. More investment was a dire necessity.



Group-II

Volume-III  
Abstract-427

DIAGNOSIS AND PREVENTION OF THE LEARNING  
DISABILITIES OF PRIMARY SCHOOL STUDENTS IN  
ARITHMETIC

(Author - Bhattacharya, A., Ph.D.Edu., Cal. U., 1982)

The main objectives of the study were:

- (i) to diagnose the detailed patterns of disabilities in two areas of arithmetic common fractions and decimal fractions, and
- (ii) to try out, experimentally, teaching methods which would prevent development of learning disabilities in these areas.

Hypotheses tested were:

- (i) The experimental groups taught by audio-visual materials and techniques would achieve significantly more than the controlled groups taught by the conventional method.
- (ii) Learning through audio-visual materials and techniques would cause more prolonged retention than that by the conventional method.
- (iii) The experimental groups would show more interest in the lesson than the controlled groups.

The investigation developed a diagnostic tool in common fractions, which was administered on 450 students of Class V, and in the case of decimal fractions the sample consisted of 500 students of class V. The test-retest reliability coefficient of the former tool was 0.91, and that of the latter was 0.89. The tools were validated against individual structured interviews, and the validity coefficient was found to be 0.95 in either of these areas. The major patterns of disabilities diagnosed were forty-four in the case of common fractions and thirty in the case of decimal fractions. Duplicated method experiments were conducted with Class IV students in four coeducational primary schools. The experimental

groups were treated by audio-visual methods and techniques for which eleven teaching units were developed. The control groups were treated by the conventional methods of teaching. Intelligence Test (Kamat) was administered on both the groups before the start of the experiment as a prerequisite for the analysis of covariance. Methods of teaching were made to vary.

The covariance analysis revealed:

- (i) The first hypothesis was retained on the ground that the experimental groups had achieved significantly more than the controlled groups.
- (ii) The experimental groups showed better results and prolonged memory of the learned materials than the controlled groups.
- (iii) Circumstantial evidence suggested the retention of the third hypothesis.

INTELLIGENCE AS MEASURED BY THE NLTVI AND ITS  
RELATION WITH DIFFERENT SUBJECTS TAUGHT IN SCHOOL,

( Author- M. Mukherjee and S. Chatterji )

The major objectives were (i) to evaluate predictive ability of the NLTVI with respect to different subjects, (ii) to get a linear composite score with the separately timed part scores of NLTVI which would have a maximum correlation with the total marks in three languages viz., English, Bengali and Sanskrit included in the school syllabus, (iii) to get another composite score which would have maximum correlation with total marks in the non-language subjects like mathematics, geography, and science, and (iv) to test whether the ability measured through the NLTVI correlated more with language subjects than with the non-language subjects.

Sample for this study consisted of class VIII students from ten boys and seven girls higher secondary Bengali medium schools at Calcutta which were selected at random. The NLTVI was administered on 498 girls and 807 boys and their class VIII annual examination marks were collected.

Findings of the study were (i) Boys and girls did not differ significantly on all the four parts of the NLTVI (ii) Except for two correlations, namely between part I and part II and between Part III and Part IV, other correlations between different parts of the test were considerably low. (iii) The average performance of boys in the school examination was significantly better than that of girls, in five out of seven subjects (iv), the zero order correlation coefficients between NLTVI and school examination marks ranged between 0.02 and 0.37 (v) The regression coefficients, multiple correlation coefficients and factor analysis results of school examinations marks indicated that from the point of prediction of academic achievement NLTVI was comparable with a verbal intelligence test which used language as the medium.



Group-II

Vol.III  
Abstract- 766

SCHOLASTIC BACKWARDNESS IN THE BASIC PROCESSES IN  
ARITHMETIC- DIAGNOSIS AND PREVENTION

(Author- A.K. Ghosh , Ph.D., Edu., Kal., U., 1982)

The objectives of the study were (i) to diagnose children's disabilities in specific areas of addition and subtraction in arithmetic with the help of specially developed diagnostic tools, and (ii) to suggest preventive measures for removing the expected learning disabilities in those areas:

The sample for diagnosis of scholastic backwardness consisted of 200 students of class II of six primary schools selected from culturally, socially, and economically disadvantaged areas, while the experiment was conducted on students of class I from four primary schools situated in similar disadvantaged area. The developed diagnostic tools in addition covered nine major objectives, thirty four specific objectives and consisted of 100 test items while those in subtraction consisted of four major objectives, sixteen specific objectives with 100 test items. The test-retest reliability coefficients for tools in addition and subtraction were 0.98 and 0.94, respectively. An individual structured interview was conducted with twenty percent students selected at random from the sample to validate the tools. The validity coefficients were found to be 0.99 for both the tools, For suggesting preventive measures twenty clusters of disabilities in addition and sixteen in subtraction were identified as the basis for the experimental study. Nine teaching units were

specially developed on the basis of qualitative and quantitative analysis of learning disabilities already diagnosed. The experimental groups were treated by piagetian methods of instruction of the child's conception of numbers; the controlled groups were taught conventionally. Nine independent variables were controlled either by physical or selective manipulation. Karmat's Intelligence Test was used as pretest for covariance design. The diagnostic tools developed were used as posttests. Conclusions were drawn from covariance analysis.

The conclusions were (i) The experimental groups taught by piagetian methods achieved more than the controlled groups taught conventionally. (ii) The experimental groups showed significantly better achievement than the controlled groups when both the groups were evaluated on the posttest 15 days after the experiment. (iii) The experimental groups showed greater motivation in learning.



Group-II

Vol.III  
Abstract-776

CONTENT ANALYSIS OF GENERAL SCIENCE TEXTBOOK FOR  
STANDARD IV,

(Author- M.G. JOSHI-)

The study was conducted with objectives(i) to examine whether the content of the textbook was suitable according to age and understanding level of pupils, (ii), to study the suitability of the explanations and illustrations provided in the textbook and (iii) to ascertain whether the language and vocabulary used in the textbook were appropriate.

The study was carried out adopting the technique of content analysis. The investigator used an information unit as the basic unit for content analysis. An information unit was defined as an independent piece of information which of each lesson was analysed into the information units by paying special attention towards denoting pre and post context. Each information unit was then cut out from the textbook and pasted on a card and the central statement of the information unit, its placement, its supportedness or unsupportedness, nature of sport, etc. were specified. Thus a set of cards were prepared for each of the twenty lessons, the total number of information units being 493. These were then analysed again after further scrutiny raising the number of information units from 493 to 733. Implied objective of science teaching for each information unit was noted in terms of knowledge, understanding, application skill and appreciation.

The frequency of occurrence of these objectives in the textbooks as a whole was calculated, and the relative weightage given to each objective as examined. Also the supports that accompanied the various central statements were categorised into six types, namely experiments, visual illustrations, verbal illustrations, reasoning, statistics and reinforcements on the basis of which the frequency of occurrence of which each category of support in the whole textbook was calculated.

Major findings of the study were as follows:-

- (i) Contents of the textbook except in case of one lesson were suitable to the age of the pupils.
- (ii) Sequences of presentation of information units was quite proper.
- (iii) There were a few grammatical errors but the content was free from factual errors.
- (iv) Weightages given to the objectives of developing scientific skills and appreciation of science ~~he~~ increased and weightage for knowledge objective reduced proportionately.
- (v) More use be made of statistics in tabular form in supporting central statements of information unit.
- (vi) There was need to increase the coloured pictures in the textbooks some of the pictorial illustrations were not accompanied by definite description and instructions regarding what to look for.

CHILDREN'S REACTIONS TO FRUSTRATION, PH.D. EDU., DEL.U., 1958.

( Author - PAREEK, U. )

This investigation attempted to study the developmental patterns of children's reactions to frustration.

The children's form of the Rosenzweig Picture Frustration Test was adapted and standardised for this study. For scoring reliability 100 protocols of children of age group 6 to 11 were independently scored by two persons, including the investigator. The average percentage of agreement was .79. The reliability of the instrument was examined by studying its stability. A sample of 50 boys of 12 years of age was used. The instrument was administered to the children in two groups. After a period of 22 months, it was again administered. The investigator administered it at both times. The protocols were scored by the investigator immediately after administration each time. The results of the test-retest reliability were analysed both in terms of the factors and the items. The reliability (stability) coefficient (both for matrix reliability and item reliability) were quite high, and indicated satisfactory reliability of the instrument. The validity of the instrument was found out by using four different methods - comparing P.F. scores with teachers' ratings, comparing delinquents with sample norms, effect of arstatistical procedure of regional analysis of the P.F. protocols. The Indian adaptation of the P.F. study was administered to a population of 1,002 children of ages 4 to 13 of Delhi schools. The administration procedure followed was the standard one as indicated by Rosenzweig. For the final sample only those protocols were taken into consideration which were complete in all respects. Protocols with one or more missing responses were excluded. The study was administered in groups to children of ages 9 to 13. The standard procedure of allowing each child to use a separate answer blank was followed. For children of ages 6 to 8 individual administration was preferred. Children of both sexes as well as from the various socio-economic strata were selected. The method of stratified random sampling was used for selecting the sample. A total number of 9 schools were selected.

The analysis of the data showed that as far as the categories are concerned, extrapunitive predominates all age groups. Similarly ego-defensive behaviour seems to be an important characteristic at all age levels. The percentages of E and C-D are quite high at every age group, though there are some developmental changes as far as their predominance is concerned. From the point of view of scoring factors, the factors E and I (tendency to excuse oneself from blame) seem to be important at all age levels. Since M (tendency to excuse others) and I have a very close relationship, this shows a tendency of excusing oneself and others being an important factor in the child's life. Also it is found that for direction of aggression, although extrapunitive predominates at all age levels, there is a definite trend in the decline of extrapunitive with the increase in age. A corresponding increase

in intrapunitiveness and impunitiveness is noticeable. The increase in the rate of increase from one age level to the other; and there is increased percentage shown at four year age level than at five year age level. These trends show that children tend to be less extrapunitive as they develop, and perhaps learn to be self-critical (intrapunitive) and oblivious of the frustrating experiences (extrapunitive). There is an indication that percentage for group conformity rating scores steadily rises with increase in age, although there is slight reversal at the age levels of 12 and 13. The rise is quite steady. This is an indication of the increase in conformity to group behaviour with an increase in age. Calculations regarding the various nine scoring factors reveal the consistent predominance of the factor F throughout the age levels. It is followed by factors E and I and then by M. There are some distinct trends of steady change visible in super-ego factors. E steadily decreases with advance in age. The tendency to deny any responsibility for the offence seems to decline with age. Similarly E-E has also a declining tendency, although not so distinct. There is a steady increase in I, and the differences between the frequency at four year level and thirteen year level is highly significant. This shows that although there is an increase in self-critical tendency with age (I) and the child does not offensively deny the responsibility as he grows older (decrease in E), the tendency to excuse oneself from blame becomes more marked with advance in age. The category M, as has been shown above, also increases with age. Since I and M have so much in common, these are combined and it may be seen that the variant M-I steadily increases in strength with age. As observed by Rosenzweig, "The tendency for the two types of response here in question to increase with maturity may be taken to reflect one result of socialisation."

The above findings were compared with those from America and Japan in order to show the cultural differences in the field of personality development.

GROUP-II

Volume - I  
Abstract - 164

MOTIVATION TRAINING FOR MENTAL HEALTH ( A STUDY OF  
TEACHER BEHAVIOUR AND STUDENT MENTAL HEALTH).

( Author - PAREEK, U. AND RAO, T.V.,  
National Institute of Health Administration  
and Education, New Delhi, 1971. (ICMR financed).

The objectives were: (i) to make a survey of the important mental health variables among school children; (ii) to make a survey of patterns of class-room behaviour of teachers; (iii) to make a study of the relationships of teacher's classroom behaviour and positive aspects of pupils' mental health; and (iv) to experiment with methods of motivation training of teachers with a view to improving pupils' mental health.

To survey the mental health among school children, the variables studied were adjustment of children towards home, school, friends, teacher and a few general matters as self-perception, dependence level, initiative level, trust on teacher as well as class fellows, activity level, socio-economic status, intelligence level and ways of meeting the frustrating situations. Tests were developed to measure the first six variables. Prayag Mehta's Intelligence Test and Pareek's Indian Adaptation of Rosenzweig Picture Frustration Test were also used. For survey of the mental health variables, the tests were administered to 1,700 pupils of class V drawn from fifty primary and middle schools of Delhi. All the students were from single teacher classrooms. For this, schoolwise means, itemwise percentages of student responses and sex differences were calculated. Teacher behaviour was surveyed by Flanders Interaction Analysis Category System. Teachers from the fifty schools were observed for an hour and a half on the average. Indirect/direct influence ratios and teacher/student talk ratios were calculated to measure the influence patterns. To find out associations between teachers' interaction behaviour and students' mental health levels, 25 percent of teachers from the sample showing highest indirect influence and 25 percent showing highest direct influence were chosen. Chi-square was computed to test whether highly indirect or highly direct influencing teachers had significantly more number of high scoring students on each test showing an association between the two sets of variables. In the motivation training it was intended to study whether a change in students' mental health can be brought about where teachers were trained in interaction analysis, but as it could not be done, the experiment was conducted with a group of nine teachers who were observed before training. After a ten-day training programme in interaction analysis feedback was given to teachers regarding their classroom behaviour and an opportunity to experiment with new patterns of interaction. Post-training observations immediately after training and a few months later, were made. An untrained group was also observed for comparison.

Results of the mental health survey revealed that (i) the pupils were fairly well adjusted with regard to parents and home; (ii) seven percent pupils did have problems; (iii) adjustment levels with peers, teachers, school and other general areas were positive though not very high, particularly in adjustment towards school; (iv) they were neither too dependent nor independent; (v) they showed a considerable amount of trust in teachers and class fellows; (vi) they had above average initiative and activity levels; (vii) their intelligence levels were the same as that of VII and VIII grade students of Rajasthan; (viii) when faced with frustrating situations they had more extrapunitive and ego-defensive reactions; the Flanders Interaction Analysis revealed that (ix) teachers talked fiftyfive percent of the time (less than in other countries); (x) student talk was thirtyone percent of the time; data for associations between teacher behaviour and student mental health revealed that (xi) teachers using high indirect/direct influence had significantly higher number of well adjusted students, high in intelligence, high in initiative, more impunitive and ego-defensive but less need-persistent reactions to frustration; (xii) classrooms with low teacher/student talk ratios had more well adjusted and highly intelligent students; training results revealed that (xiii) as a result of training, teachers started using more and more interaction, using the categories of praising, encouraging, accepting and classifying the ideas of students and questions without changing the amount of classroom talk; and (xiv) teachers sustained changed behaviour for six to seven months after training; they showed differences on these categories when compared with a group of untrained teachers.

Group-II

Volume-I  
Abstract-232

CONSTRUCTION AND STANDARDISATION OF  
PERFORMANCE TESTS OF INTELLIGENCE FOR  
AGES 3 to 13

(Author - Bhatia, H.R., Tandon, R.K., Somvanshi,  
A.K.S. and Sexena, J.K. Dept. of Psy.  
K.G.K. College, Moradabad, 1964)

The project aimed at constructing a battery of performance tests of intelligence consisting of two forms: Form A for the lower age group of three to five years and Form B for the higher age group of six to thirteen years.

The subtests included in Form A were: cube construction test, picture construction test, bead test, form board test and objective identification test; and those included in Form B were: cube construction test, picture construction test, bead test, form board test and passalong test. Two tryouts were carried out before the final administration. The total number of items used in the final form for Form A and Form B were thirtysix and thirtyfive respectively. Out of these items twenty were common to both the forms to provide the overlap in the two measures. The sample used for developing the norms consisted of 1100 children in the age range of three to thirteen years - 100 cases for each year age level, drawn from the town and suburbs of Moradabad. The stratified random sampling method was used for drawing the sample.

The reliability of the tests was determined by the spilt-half method, K-R formula 20, and Gulliksen's formula, for both the forms separately. The test was validated against parents' and teacher estimates of child's ability, and scores on the Bhatia's Battery of Performance Tests. Factorial analysis of the battery was carried out. Comparisons of performances of various ages and socio-economic groups were made. Centile, standard scores and T score norms were established. It was found that the reliability coefficient for Form A ranged from .87 to .95 and for Form B from .91 to .93.





Group-II

Volume-I

Abstract-245

CIE, C.I.E.  
INDIVIDUAL SCALE OF INTELLIGENCE, NEW DELHI, 1957.

The study aimed at constructing an individual scale of intelligence in Hindi for the age group of three to sixteen and above. The idea was to adapt essentially the Terman, Merrill Revision and some other tests for Indian children so as to evolve an age scale for groups three to sixteen years and above.

The work began with a survey of the various tests devised elsewhere as based on the old Stanford-Binet. Test items were put in the age groups which were generally assigned by the various authorities. One hundred and fortyseven items constituting the provisional battery for tryout were split into two forms. The number of items included in every age group in the original battery varied from eight to twelve. The test was administered to a random sample of 1436 school children of fifty schools in Delhi metropolis. The random sample of school children was made first by randomising the schools and then randomising children in these schools. Out of 1436 children, 712 were boys and 724 were girls. From the analysis of the socio-economic status of parents numbering 1345, it was found that a large majority was from middle class families. The percentage of passes for each test item, in each age group, for boys and girls together, was determined and so also the difficulty values of each test item, in terms of the percentage of passes on individual items in the random sample of children were calculated. Care was taken that the scale was not overloaded with verbal items and that nonverbal and performance items had a fair share in at least earlier stages. In assigning ages to various test items, Burt's method was followed in preference to that of Terman. Thus assigning the ages to the various good items, a tentative scale was formed. The finding of IQs on the scale could be possible for children of ages upto eleven plus with the items selected upto the age of eleven. The test items put in the scale for ages three to eleven plus could be accepted as valid for finding IQs of children of age below eleven and the validity of items beyond that age level (exactly beyond twelve years of age) in the same had to be further determined after

selecting items for age level of fourteen years and for the adult level. The validity of various test items was further examined by calculating biserial  $r$ 's for each test item as against the test as a whole. Mental ages for each age group were taken to represent the total score on the test. For tests allocated to a particular age, biserial  $r$ 's were calculated for that age and also for the ones preceding and succeeding.

The validity of the scale, so far finalised, has not been examined against any other external criterion. For the present, the scale consisting of valid items and having the criterion of internal consistency fairly fulfils the necessary conditions of a standardised test of intelligence and can be used for children of age groups below eleven years for estimation of their IQs.

SCHOOL SITUATIONAL BEHAVIOURS AND RATING SCALES FOR  
ASSESSING PERSONALITY TRAITS OF PRIMARY SCHOOL  
PUPILS, NCERT, NEW DELHI, 1971.

( Author - RAMJI, M. T. )

The present study was concerned with the identification of school situational behaviours pertaining to selected personality traits of primary school pupils and the development of observation schedules and rating scales for assessing the selected personality traits of pupils in the age group six to eleven.

Twenty personality traits were selected in consideration to age and developmental level of children, common school programmes and desirability of the trait. The list was reduced to fourteen traits in the light of pooled judgement of principals and teachers of primary schools and the researchers. Desirability of the trait and practicability of developing and measuring it were the guidelines to prepare this list. Each trait was defined by way of specifying the school situations where rating was possible. The systematic observation of behaviours of primary school pupils was undertaken by two researchers to validate the school situations relevant to the selected personality traits in the modified list. Analysis of the observed data showed that the school situations through which traits of perseverance, concentration, respectfulness and cheerfulness could be manifested were very small. They were, thus, dropped and the observation schedules were developed for the traits such as (1) cleanliness, (2) punctuality, (3) regularity (4) cooperation, (5) leadership, (6) honesty, (7) helpfulness, (8) curiosity, (9) obedience and (10) self-confidence on the basis of the data obtained experimentally. Rating scales were developed for these areas with five descriptive points for each, ranging from 'almost always' to 'very rarely' to reflect the occurrence of a particular behaviour. Inter-observer reliability of the traits specifications was established by applying the Osgood's formula to see the agreement in the observations made by two researchers independently. For all the traits, this agreement was found to be more than sixtyfive percent. Developed rating scales were tried on a sample of five schools. After due orientation to teachers, they rated the pupils in different classes. These ratings showed that all the pupils could be rated on all the traits during the period of twentyone days along with their normal classroom duties. Interrater reliability of the scale was established by comparing the ratings given by a rater regarding each trait during first week, with those given by him during third week. The Osgood's formula was used for this purpose. For each trait the average percentage of arrangement was found to be more than sixtyfive.

The observations of the study were (i) primary schools which regularly organise the programmes, viz., classroom teaching, curricular and cocurricular activities, manual work, creative and artistic work, would help in the formation of traits like cleanliness, punctuality, cooperation, leadership, regularity, honesty, helpfulness, curiosity, obedience and self-confidence; (ii) observation schedules pertaining to the school situational behaviours of the personality traits would be helpful to teachers in carrying out systematic observations of the behaviours of the primary school pupils; (iii) the set of refined rating scales of personality traits prepared, would be a practical help to primary teachers; and (iv) the refined rating scales would provide reliable and useful data to the teachers.

Group-II

Volume-I  
Abstract-336

BACKWARDNESS IN MATHEMATICS AND BASIC  
ARITHMETIC SKILLS

(Author - Gupta, R. C., Ph.D.Edu., Del. U., 1972)

The purpose was to provide a standardised tool to the teachers and research workers whereby they would be able to diagnose the weak areas in mathematics. The hypotheses were:

- (i) the backwardness in mathematics in class VIII is due to poor command over basic skills in arithmetic;
- (ii) low achievers in mathematics have poor command over basic arithmetic skills, whereas high achievers have good command over it;
- (iii) backwardness is closely related to the attitude towards mathematics;
- (iv) high achievers have more favourable attitudes than low achievers; and
- (v) basic arithmetic skills can be mastered easily by means of a suitable remedial programme.

The pretreatment tests were administered to 294 boys and 265 girls of grade VIII from selected eight government schools. Out of these, 180 boys and 176 girls were selected for the final study. The Raven's Progressive Matrices was used to measure general intelligence. An attitude scale was developed to measure attitude towards mathematics. The test of basic skills in arithmetic was constructed to measure command over basic arithmetic skills. The achievement in mathematics was measured by the Mathematics Achievement Survey Test prepared by the NCERT. Diagnostic tests in basic arithmetic skills were developed to determine the exact nature of weakness. Similarly, a course of self-help in basic arithmetic skills, a programme of remedial work was developed by the investigator to use as 'treatment' for this study.

The important findings were:

- (i) low achievers in mathematics have poor command, whereas high achievers have good command over basic arithmetic skills;
- (ii) attitudes improve significantly when command over basic skills improves;
- (iii) low achievers in basic arithmetic skills have negative attitude towards mathematics, while high achievers have positive attitude;
- (iv) there is a positive relationship between intelligence and basic arithmetic skills but attitude towards mathematics is not significantly related to intelligence;
- (v) there is a significant positive correlation between intelligence and achievement in mathematics;
- (vi) basic arithmetic skills can be quickly and conveniently mastered by the course of self-help in basic arithmetic skills; and
- (vii) there are no significant sex differences either in attitudes or in achievement in mathematics.

A STUDY OF THE WRITTEN VOCABULARY OF THE  
SIXTH CLASS CHILDREN IN DELHI SCHOOLS

(Author - Pasricha, P. and Das, S.K., CIE, 1959)

This study has made preliminary attempts at the analysis of the written vocabulary of the children studying in the sixth grade of Delhi schools.

A sample of 527 students from twelve different schools was selected. There was an equal representation of boys and girls and the three main socio-economic levels. One composition from each student was collected. The compositions were collected on a form which gave the beginning of the composition to every student and after which the students were free to write as they liked. The compositions were analysed for the count of total vocabulary and the counts on the different kinds of words used. Comparisons on all the scores were made on the basis of sex.

It was found that:

- (i) girls are advanced in their language when compared with the boys of the same class and background;
- (ii) this superiority of girls is consistent and spread over all the categories considered in this study;
- (iii) children coming from the upper SES show a superiority over those coming from the lower SES; and
- (iv) the proportion of the different kinds of words is the same for every group of SES.

The conclusion drawn from this study was that the development of language passes through the mere accumulation of words and proceeds on to the mastery of some of them, thus adding to the repertoire of correct vocabulary of the child. With better environment and stimulation the child completes this process sooner than the children with poorer environment can afford to do.





Group-II

Volume-I  
Abstract-382

ADAPTATION OF PROGRAMMED LEARNING MATERIAL  
DEVELOPED ABROAD

(Author - Gupta, M.C., NCERT, N.Delhi, 1965)

The study explored the possibilities of adapting programmes developed abroad for use in our country. The investigator tried out one such programme on 'Force' in Physics on students of a Delhi school to find out whether some adaptations were necessary.

The sample consisted of grade VIII students of an English medium school of Delhi. The study was conducted in two phases. In the first phase, the experimenter worked individually with students and modified the programme on 'Force' developed abroad in the light of difficulties experienced by these students as well as his own previous experiences with Indian students. The modified version of the programme on 'Force' was then given to a group of students and their performance was compared with another group of students from the same class and school who were taught the same topic by the usual method. Students were assigned randomly to the two groups. In the second phase, the adapted programme was compared with the original programme following the same design for the first phase. Mean, variance, t-test and F test were computed for analysis of data.

The findings of the study revealed that:

- (i) the criterion test showed no significant difference between the group studying the topic on its own through the modified programme and the control group taught by a teacher;
- (ii) the lower ability students in the group which studied through modified programme were benefited more than those of similar ability in the group that studied through the original programme;
- (iii) the factors which made a programme easier for American youngsters, made it more difficult for Indian children to whom the American child's 'every day experiences' were quite novel;

- (iv) these difficulties would grow in number and intensity if the original programme was given for use to students in other average Indian schools, and
- (v) a graduate in science with some acquaintance with programmed learning, but by no means an expert in physics or programmed learning, working part-time could adapt a programme in about a month, whereas a team of physicists and psychologists working whole time, would require three to six months to prepare a new programme on the same topic.

It has been suggested that experiments are necessary to study the savings in time and cost without sacrificing the achievement and also to find out more about the kinds of difficulties faced and the strategies of adaptations necessary to remedy them.

Group-II

Volume-I  
Abstract-387

A COMPARATIVE STUDY OF TEACHING BY DIFFERENT  
METHODS OF PROGRAMMING OF DIFFERENT LEVELS  
OF PUPILS

(Author - Kulkarni, P.V., & Yadav, M.S., NCERT,  
N.Delhi, 1966)

This study attempted to know which method of programming could have been impact on instruction for the development of an ability for a given group of students.

Branching, linear and simple programmes (i.e., without providing immediate knowledge of results) were tried out on below average, average, and above average students to study the relative effects of different types of programmes on the development of knowledge comprehension and application objectives for 'Solving Simple Equations'. The sample consisted of class VI students of an English medium school in Delhi. Three matched groups were formed on the basis of marks obtained by students in mathematics in their last examination. These groups were then administered the different styles of programmes on 'Solving Equations'. The treatment lasted for a week. To analyse results, 'treatment x levels' design of analysis was followed and F values were computed.

The main findings were:

- (i) F values for the treatments were 3.15 and 5.14 respectively, which obviously showed that the treatment effects did not seem to be significantly different;
- (ii) with so many missing cases, with school marks not very much dependable as criterion variable and the sample size being also quite small, no sound conclusions could be drawn;
- (iii) to arrive at certain conclusions replications with better control were needed.



Group-II

Volume-I  
Abstract-393

# A PROGRAMME ON EQUATION SOLVING

(Author - Shah, M.S., NCERT, N.Delhi, 1964)

The present study, one of the first systematic attempts in the field of programmed learning in India, aimed at developing a programme on solving equations and evaluating it against the conventional lecture method.

The sample consisted of three sections of class VI in an English medium school in Delhi, two of them being treated as experimental groups and one as control group. Treatments assigned to the three groups were by simple randomisation. The first experimental group was given programmed material and was asked to study on its own. The second experimental group was given the same programmed material and in addition, the class teacher was asked to help the students in learning the topic. The control group was taught through the conventional lecture method. A pretest was given and covariance analysis was used to partial out any initial differences.

The findings of the study revealed that:

- (i) the experimental group taught by programme alone achieved more in less time;
- (ii) as regards the ability dimension within a group, it seemed that the programme was effective in terms of gain for all the ability groups;
- (iii) no significant interaction between treatment and ability was found, and
- (iv) the group taught by the teacher with the help of programmed instruction failed to do better; this surprising finding could be explained by 'indulgent mothering' on the part of the teacher which arrested pupil initiative.



Group-II

Volume-I  
Abstract-396

A STUDY OF ACHIEVEMENT IN GEOGRAPHY THROUGH  
PROGRAMMED INSTRUCTION

(Author - Sharma, R.A., NCERT, N.Delhi, 1966)

The purpose of the study was to develop a lesson in geography on the programmed learning model and then to compare it with a lesson on the same topic taught by the teacher through the conventional method.

A programme was developed on the topics in geography, covering the shape of the sun and the earth, earth's rotation and revolution, north and south poles, and latitudes and longitudes. Random replication design was followed for comparing the programmed lesson with the conventional lesson. The sample consisted of four sections of class VIII, selected from an urban and a rural school. Two sections, one each from rural and urban schools, were given the programmed lesson. The remaining two sections were taught through the conventional method. A total of 133 students, sixtytwo from urban and seventyone from rural schools, participated in this experiment. A pretest and a post-test were given to all students to study the effectiveness of two methods.

The findings of the study revealed that

- (i) there was a gain of 23.10 points in the pretest and post-test scores of the group taught by the programmed learning method;
- (ii) the group taught through the conventional method improved on its pretest scores by 9.12 points only; and
- (iii) the difference between these two scores was significant at .01 level, showing a clear superiority of the programmed learning method.





Group-II

Volume-I  
Abstract-481

# CHANCE IN THE TRADITIONAL EXAMINATIONS

(Author - Harper(Jr.), A.E., Ewing Christian College,  
Allahabad, 1967)

The present study attempted to investigate into the probability that a traditional type examination, even if it is marked with perfect reliability and objectivity, will still be nonrepresentative enough so that the mark which a student obtains will be

- (i) much higher than his true mark, or
- (ii) much lower than his true mark.

The investigator categorised all possible questions that might appear in the examination, covering a particular course, as best, average and worst. He further assumed that for a student, of all possible questions that might appear in the examination, one-fifth would be best, three-fifths average and one-fifth worst. With these assumptions, the investigator calculated the probability (i) that an examination would be easier than it should be for a particular student, (ii) that an examination would be harder than it should be for him, and (iii) that an examination would be exactly representative for him. The investigator also compared the probabilities for easy and hard examinations, arts and science examinations and discussed the effect of chance on a group of examinees.

The study led to the following conclusion;

- (i) there is more than one chance in two that an examination will be 'too easy' for a given student;
- (ii) the chances that the student will have to answer two or more of his 'worst' questions are only about three in 100;
- (iii) the chance that he will have to answer questions only from among his 'worst' is the submicroscopic figure of one in 20,00,000.

(iv) the probability of an examination being 'representative' for any particular student is .135;

(v) when a choice of questions is allowed in an examination, the probability that the student's answer will accurately represent his level of mastery of the entire course is extremely low and the probability that the level of his answers will be higher than that of his general mastery is much greater than the probability that it will be lower; and

(vi) the discussions and calculations show that the chance factors become critical only because everyone assumes that the examination represents the whole course, and that valid predictions can be made from examination marks, but this is simply not so.

Group-II

Volume-I  
Abstract-481

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THE ROLE OF ANXIETY IN LEARNING AND  
ACADEMIC ACHIEVEMENT OF CHILDREN

(Author - Pandit, K.L., Ph.D.Edu., Del. U., 1969)

The purpose was to study the role of anxiety in academic learning and achievement of school boys of grade V. The major hypothesis was that an overall negative relationship exists between anxiety and other independent variables.

The sample consisted of 145 grade V boys in one elementary school in Delhi. The CIE Group Test of Intelligence (11-12) and the adaptations of four anxiety scales (MAS, GAS, TASC, AASC) were used. Two questionnaires, one seeking information about socio-economic status and the other, regarding the relationship of the subjects with their respective parents and siblings, and the demands which the parents impose on them with regard to their academic achievement, an observation schedule and achievement tests in Hindi and Mathematics were also prepared and used.

The important findings were:

- (i) anxiety bore a negative relationship with learning and academic achievement;
- (ii) subjects having less anxiety were found superior in learning and achievement, irrespective of the task difficulty, to those having more anxiety;
- (iii) high learners and achievers were more anxious than low achievers and learners in motivating content situations;
- (iv) when anxiety was experimentally induced, lowest anxiety group showed a significant improvement in achievement in the retest, while the highest anxiety group showed poor performance in the retest;

- (v) subjects with low intelligence and high anxiety did not improve in achievement up to the expectation as a result of induced anxiety;
- (vi) better achievement did not act as a reinforcement in improving achievement of high anxious low achievers; and
- (vii) anxiety interfered with the retention of learning.

Group-II

Volume-I  
Abstract-531

A. COMPARISON OF THE ATTAINMENTS OF  
CHILDREN OF THE C.I.E. BASIC SCHOOL  
WITH THOSE OF OTHER SCHOOL CHILDREN  
IN DELHI,

(Author - Shukla, S. & Tutoo, D.N., CIE, 1959)

The purpose of this study was to compare the achievements of the CIE Basic School children with those of children from other schools - Basic and traditional.

The sample consisted of grade VI children from CIE Basic School and other schools - Basic and traditional, of Delhi. In all, nine schools of Delhi having different structure and nature were sampled. Out of these nine, one was the CIE Basic School. A sample of about 400 students was picked up. Four achievement tests for the subjects of Hindi, social studies, arithmetic and general science were prepared. The data were subjected to statistical techniques like mean, SD, CR and ranking.

It was found that the mean scores of CIE Basic School in Hindi, arithmetic, social studies and general science ranked third, fourth, first and second respectively. Comparison with the help of significance of difference between mean scores of CIE Basic School on one hand and the other schools individually on the other, gave a mixed pattern of information.





WASTAGE AND STAGNATION IN PRIMARY AND MIDDLE SCHOOLS  
IN INDIA, NCERT, NEW DELHI, 1969.

( Author - SHARMA, R.C., AND SAPRA, G.L. )

The survey was undertaken to study the problem of wastage and stagnation in depth, and pin point the facts and also to ascertain and analyse the causes of wastage and stagnation.

A student sample of 790 dropouts and 485 stay-in cases was selected from ninetytwo schools of Punjab, Rajasthan, Maharashtra and the union territories of Himachal Pradesh and Delhi. School Information Blanks and Pupil Information Sheets were used for collecting data about schools, and dropouts and stay-ins, respectively. Interviews were also conducted with the dropouts as well as their parents to supplement the information. The data were statistically analysed and interpreted.

The findings of the study revealed that: (i) wastage and stagnation is sixtyfive percent by the time children reach grade V and rises upto seventy-eight percent in grade VIII; (ii) about fifty percent of wastage is noticed in class I itself and gradually the rate decreases as the child moves up the ladder (iii) incidence of wastage and stagnation is more in girls than in boys; (iv) the wastage and stagnation remained constant at both primary and middle levels during the past decade despite the fact that the per capita expenditure per pupil has increased; (v) wastage is more in the shift system schools than in single shift system schools; (vi) the rate of dropout is negatively related to the qualifications and the per capita income of teachers; (vii) the number of dropouts is also negatively correlated with the cocurricular activities in the school; (viii) distance of the teachers' residence from the school and teacher pupil ratio are positively correlated with wastage; (ix) academic achievement is superior for the stay-ins than for the dropouts, (x) higher age levels and lower attendance are noticable among dropouts; (xi) stay-ins hold leadership assignments in schools and perceive that their parents attach higher significance to education; (xii) more dropouts are reported from small size families; (xiii) dropouts are usually from nuclear families who have suffered the death of one or both the parents; (xiv) dropouts are usually older in age and come from families of the low income group; (xv) some of the parents of dropouts are insensible to the physical facilities available at the school and perceive no need for the education of their children; (xvi) fortythree percent of dropouts are from rural areas; (xvii) illness, mental retardation, economic backwardness, social maladjustment, home problems, etc., are some of the factors for dropping out from the school; (xviii) attendance, parents' view of children's performance, motivation for learning at home, caste and age at the time of admission are some of the discriminating factors between the dropouts and stay-ins.



GROUP II

VOLUME II  
ABSTRACT-53

A STUDY OF THE DEVELOPMENT OF PRIMARY  
EDUCATION IN DELHI FROM 1913 TO 1968,  
PH.D. EDU., KUR. U., 1977.

(Author: S.P. Sherma)

The main objective of the study was to find facts related to the development of primary education in Delhi and to critically analyse various trends of development in respects of schools and scholars, teachers, their training and status, educational finance, wastage and stagnation, compulsory primary education, junior basic education, education for the backward classes, and the role of local bodies.

The historical research method was employed. The primary and secondary sources of data were periodical reports and resolutions of the government, unpublished data on the progress of education available with National Archives of India, proceedings in Central Legislative Council, Lok Sabha and local bodies, planning and techno-economic data, census reports, published books and journals, newspapers, etc.

Pre-independence period was a period of slow progress in respect of provisions for schools in comparison to post independence period. The number of primary schools increased from 86 in 1913 to 248 in 1947, with an annual growth rate of 5.4 percent, whereas during the post independence period the number of primary schools increased from 248 to 922 in 1968 with an annual growth rate of 13 percent. The average area served by a primary school decreased from 15.7 sq. kms. in 1913 to 6.00 sq. kms. in 1947 and to 1.6 sq. kms. in 1968.

The number of primary schools for boys increased from 76 in 1913 to 183 in 1947 and 540 in 1968, while the primary schools for girls increased from a mere 10 in 1910 to 65 in 1947 and 372 in 1968.

Scholars in the primary schools increased from 5393 in 1913 to 37,350 in 1947 and to 2,65,711 in 1968, with an average growth rate of 16.9 percent in pre-independence period and 29.11 percent in post independence period.

In 1913, only 2.1 percent of the total population of Delhi were enrolled at the primary stage. This rose as high as 11.61 percent. In 1968, eightysix percent of the population between the age group six to eleven years was enrolled at the primary stage, the percentage of males being higher in comparison to that of females.

The total population of Delhi was estimated to be 57.9 lakhs in 1978 including 8.28 lakhs of children to be at the primary stage, and expecting 12.42 lakhs of children to be at the primary stage in 1988. On the basis of these figures there w still required 1577 schools in 1978 and would require 2153 schools in 1988.

Compulsory basic education in the selected areas of Delhi was introduced by extending the Punjab Primary Education Act of Delhi in 1925. It was obligatory for the parents to send their children to schools unless there was reasonable excuse for non-attendance. During post independence years there was rapid expansion of compulsory primary education due to introduction of basic education scheme in Delhi.

Hartog Committee and Wilson Committee on Municipal Education found eighty percent wastage in primary education in Delhi during 1927-30. During post independence period, there was a downward trend towards reduction of wastage at primary stage. Stagnation stood at 11.7 percent at primary stage in 1968.

Onsequent to the prolonged delay in the introduction of junior basic education by the local bodies in Delhi, Government of free India took the initiative for its introduction by establishing ninetyseven basic schools in the rural areas of Delhi in 1948, which rose to 894 in 1963.

The number of scholars belonging to depressed classes at primary stage increased from 503 in 1927 to 4370 in 1947-48 and 57,644 in 1968-69, mainly due to the proclamation of the fundamental right to equality and safeguard to the interests of scheduled castes.

GROUP II

VOLUME II  
ABSTRACT-53

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EDUCATION IN DELHI FROM 1913 TO 1968,  
PH.D. EDU., KUR. U., 1977.

(Author: S.P. Sharma)

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The number of scholars belonging to depressed classes at primary stage increased from 503 in 1927 to 4370 in 1947-48 and 57,644 in 1968-69, mainly due to the proclamation of the fundamental right to equality and safeguard to the interests of scheduled castes.

Percentage of trained teachers in the primary schools remained poor till 1935-36, but it considerably improved after 1935, that in 1947 there were 93.5 percent trained teachers. In the post independence period the situation still changed and there were 99.9 percent (both male and female) trained teachers. Quality of teachers with respect to general education also increased significantly. There were a few graduate teachers in primary schools before independence, but in post independence period there were post graduates also. In 1968, there were 2,135 graduates and 231 post graduates. During the period of study the pay scales were revised in 1917, 1932, 1948, 1959 and 1968. Teachers in Delhi enjoyed double old age benefits, viz., pension and gratuity.

From 1913-14 to 1968-69, except for few years, after the introduction of compulsory primary education in Delhi, local self-government became the major source of financing the primary education. Government remained the second significant source from 1921-22 to 1957-58. After 1958, the local self-government emerged as a single source of financing the primary education. The government happens to be the only source of financing teachers' training institutions since 1886 in Delhi. Local bodies and voluntary agencies started playing a major role in primary education since 1919. The voluntary agencies were mostly religious and regional in nature.

The interaction of socio-cultural, economic and political processes have provided a dynamic force to the progress of primary education in the later years in Delhi.





GROUP II

VOLUME II  
ABSTRACT-427

A COMPARATIVE STUDY OF MOTHER TONGUE TEXTBOOKS  
PRESCRIBED FOR PRIMARY CLASSES IN BENGALI,  
GUJARATI, HINDI (DELHI), HINDI (U.P.), TELUGU  
AND URDU, NCERT, NEW DELHI, 1975.

(Author: K.G. Rastogi and Others)

The objectives of the study were: (i) to study the text books with special reference to (a) lessons, (b) exercises, (c) illustrations, (d) ancillary material and (e) physical aspect of textbooks, (ii) to analyse the content of textbooks and find out the weightage allotted to different components of the content, e.g., ideational content, linguistic content, etc., and (iii) to find out the relative weightage given to different instructional objectives.

An explanatory note on the aspects and criteria of textbooks was prepared to explain the content of study and to solve the problem of semantics, and an analysis sheet was prepared to analyse the textbooks on seventeen variables. Frequency distribution, range and percentage were used to analyse the data.

The important findings of the study were: (i) in regard to the 'Lessons', the most popular items were tales, fun and recreation, nature and natural environment, home, school and neighbourhood; the least popular items were 'Patriotism' and 'Technology'; the minimum and maximum number of new teachable words in different textbooks were as follows: (a) for Class I, minimum was 176 Hindi (Delhi) and 810 Urdu was the maximum, (b) for Class II, minimum was 215 Hindi (Delhi) and maximum was 785 Gujarati, (c) for Class III, minimum was 193 Urdu and maximum was 699 Hindi (Delhi), (d) for Class IV, minimum was 192 Urdu and maximum was 928 Hindi (Delhi), (e) for Class V minimum was 219 Telugu and maximum was 875 Hindi (Delhi); (ii) in

connection with the exercises, there was more emphasis on 'expression' in Bengali series, whereas in Gujarati series, the exercises were focussed on 'information' and 'comprehension', exercises in Hindi (Delhi) series were 'expression' and 'comprehension' loaded and Hindi (U.P.) series was mostly 'comprehension' based while Telugu and Urdu series were 'information' loaded; inferences were drawn likewise on the following variables themes, values, psychogenic needs, vocabulary, sentences, instructional objectives, exercises, illustration, ancillary material, length of lesson, presentation of content, cover page, printing, paper, binding, volume and size, and price of the book.

GROUP II

VOLUME II  
ABSTRACT 594

NATIONAL SURVEY OF TEACHER EDUCATION AT  
ELEMENTARY LEVEL, DEPARTMENT OF TEACHER  
EDUCATION, NCERT, 1974.

(Author: K. Arora, H. Dasgupta, R. Chopra,  
and P. Puri)

The project was undertaken with an objective of collecting data concerning major areas of elementary teacher education such as students and staff, facilities and services, programmes, administration and supervision, etc., with a view to (i) compiling a National Report which could be used as a reference document, and (ii) locating weak areas which needed strengthening and thus required special attention of the NCERT.

A comprehensive questionnaire was used for the purpose of the survey. Data were collected from all the elementary teacher training institutions of India. The draft report which emerged out of the data was sent to the SIEs, directors of public instruction, and the field advisers for comments and suggestions. The final report was prepared after their incorporation.

The following were the major findings of the survey: (i) about 59.9 percent institutions were located in urban areas while 48.3 percent in the rural areas; 54.71 percent institutions were residential in nature, 22.84 percent were partly residential and the rest were not residential; 46.30 percent of the institutions were coeducational, 35.89 percent were for men only and 17.01 percent were for women only; 63.18 percent institutions were run by state government 27.34 percent were run as private aided and 9.47 percent were as private unaided; (ii) quite a fair justice was done to the selection of candidates for admission to training institutions, the main criterion being the marks obtained at the matriculation examination; some seats were kept reserved for scheduled castes, scheduled tribes and deputed teachers too; there was a good provision for stipend in almost all the government training institutes; in majority of the

states, no tuition fee was charged; (iii) in majority of the states, the minimum qualification required for the recruitment to the post of principal as well as the teacher educator was a trained graduate; (iv) in most of the states the syllabus was prescribed by the state department of education; most of the theory papers in different states were almost the same; the common papers were Principles of Education, Educational Psychology, Teaching of Mathematics, Teaching of Science, Teaching of Social Studies and Teaching of Languages; in many states, there were optional theory papers; practice teaching programme had a vital place in all the states; a little more than fifty percent training institutions had demonstration schools inside its campus but most of the demonstration and practising schools had inadequate accommodation and all-equipped staff; (v) in many of the states, the trainees had to practice one major and one subsidiary craft; (vi) in most of the states, the final examination was conducted by the state departments of education; usually, there was internal and external assessment for theory papers, practice teaching and crafts; (vii) poor physical facilities were observed in many respects, viz., lack of science laboratories, inadequate buildings, inadequate accommodation in the hostels, no good libraries, no trained librarians, and no adequate books and magazines; (viii) in case of government institutions, the grant from the government formed the only source of income; in case of private aided institutions also, considerable responsibility was borne by the government and in case of private unaided institutions, the main source of income was contribution from the management, donations, income from fees, etc.; and (ix) some senior officers from the directorates of education inspected the institutions and provided academic as well as administrative guidance.

GROUP II

VOLUME II  
ABSTRACT-605

AN EXPLORATORY STUDY INTO THE FACTORS  
AFFECTING TEACHER EFFICIENCY AND  
THEIR IMPLICATIONS FOR TEACHER TRAINING  
PROGRAMME AT THE PRIMARY LEVEL, PH.D.  
EDU. U., 1977.

(Author: P. Dasgupta)

The objectives of the study were: (i) to identify the characteristics, both personal and professional, that are considered as the constituents of teacher efficiency by various levels of educational personnel; (ii) to find out the situational factors that influence the teacher in performing his job to the best of his abilities; and (iii) to find out the implications of the findings for improving the teacher training programme at the primary level.

The study involved headmasters and teachers of primary schools. As a part of the study a rating scale was developed. Fifty primary schools were involved for the main study. Central tendency, Kendall's coefficient of concordance test and chi-square techniques were used for the analysis of data.

The following were the major findings of the study: (i) Twentyfour personal characteristics of teacher, which had an influence on the growth and development of children, were identified. (ii) Eleven professional competencies, which were linked with the attitude of teachers to 'self-learning' were identified. (iii) The efficiency of the teacher was affected by the presence of certain factors, such as, human relationships, socio-economic conditions of the teachers, organisation of teaching-learning process, out of school activities assigned to the teacher and socio-cultural setting of the community. (iv) The personal characteristics of the teachers found an insignificant place in the scheme of primary teacher training programmes. The teachers were seldom exposed to experience the various types of social and physical situations which they would face in life situations.



GROUP II

VOLUME II  
ABSTRACT-675

A STUDY OF THE IMPACT OF THE UNGRADED SCHOOL SYSTEM ON REDUCING SCHOOL DROP-OUT AND STAGNATION IN PRIMARY SCHOOLS (1970-74), NCERT, New Delhi, 1974.

(Author: S.L.Gupta)

The major objectives of the study were: (i) to study the impact of ungraded school system on reducing school dropout and stagnation in primary schools; (ii) to develop teaching-learning materials and teaching aids suitable for the system; and (iii) to develop scientific system of recording and reporting the progress of pupils.

The study involved experimental (project) schools and control (nonproject) schools. One of the procedures for the collection of data was survey. The other procedure comprised the collection of bench mark data, development of sequential teaching - learning materials, teaching aids, and progress recording system through workshop, orientation of teachers, headmasters, and supervisors, and assessment of the impact on the bases of their progress on tests, and interview. The data were analysed in terms of percentages and means. Comparisons were made between the project and nonproject pupils.

The study revealed that (i) the system provided for full opportunities to all project pupils for individualised instructional arrangement and pace of progress; (ii) the dropout rates for the experimental groups for the project period was 31.7 percent as against the average of fiftyseven percent; (iii) from 9.1 percent to 14.9 percent of the experimental group pupils secured accelerated progress; (iv) the average daily attendance percentage in case of the project pupils was much higher than the nonproject pupils for the project years; (v) the levels of achievement of the project pupils were higher in all the subject areas as compared to the nonproject pupils; (vi) since there was no pass mark level and learning units were given after complete learning, the gaps in the learning of the pupils were minimum in the ungraded system; and (vii) the additional cost involved in the ungraded system was only Rs.1.26 per pupil per year and hence negligible.





Group-II

Volume-III  
Abstract-211

EDUCATIONAL OPPORTUNITY FOR THE CHILDREN  
OF URBAN SLUMS IN DELHI

(Author - Patel, S.P., Ph.D.Edu., MSU, 1978)

The main objectives of the study were: (i) to explore the nature and extent of educational opportunity for the slum children of slums in Delhi, (ii) to find out whether the educational facilities were adequate for the slum children and commensurate with their needs, (iii) to study the utilisation of educational opportunity by the slum children, (iv) to study the similarities and differences in schooling facilities obtaining in slums and non-slum areas, (v) to find out the factors related to differential achievement of the slum and the non-slum children, and (vi) to suggest needed improvements in educational inputs in slum schools for equalising educational opportunities for the slum children.

The input variables studied were facilities for schooling, school resources and curriculum, teachers and pupils. The output variables considered in the study were academic achievement and certain non-cognitive outcomes of education. The sample comprised three sub-samples of schools, teachers and pupils. The sample of schools was selected on the principles of stratified, proportionate, random sampling. In all, 50 primary schools, 110 teachers and 445 pupils of Class V were included in the sample. The tools for data collection were the school questionnaire, the teacher questionnaire, the pupil questionnaire, and achievement tests in Hindi and mathematics. The study was a descriptive survey utilising descriptive statistics for data analysis.

The major findings were: (i) The schooling facilities provided by the municipal authorities of Delhi were almost adequate for the slum children. However, their utilisation by the slum-dwellers was very much below that by the non-slum dwellers. (ii) The quality of educational facilities for the slum children was very much inferior to that which the non-slum children enjoyed. (iii) In the matter of school resources, the slum schools were not at par with the schools in non-slum areas. There was much discrepancy between the slum and the non-slum schools in respect of school buildings, equipment, curriculum

and teachers and pupils. (iv) The physical and material resources of the schools in the slum area were inferior and inadequate, the curriculum was inappropriate for the slum children's needs and level of ability, and teachers of low capacity and having less interest in teaching were found in the slum schools. The children of the slum schools had less favourable conditions and facilities for studies at home, less parental support, lower self-concept and motivation for achievement and much lower aspiration for educational and occupational career. (v) In academic achievement, the slum children lagged behind the non-slum children and so also in personality development.

Group-II

Volume-III  
Abstract-224

SCHOOL DROP-OUT AMONG HARIJAN CHILDREN, CAUSES  
AND CURE

(Author - Punalekar, S.P., CIRTPO, N. Delhi, 1975)

The objectives of the investigation were: (i) to study the socio-economic background of the drop-out cases of the Harijan community, (ii) to explore and ascertain the factors responsible for their drop-out from the school system, (iii) to find out the nature of participation and involvement of the Harijan parents, school teachers and village leaders in relation to the educational needs of the Harijan children, (iv) to identify the lapses or shortcomings on the part of the Harijan family, school system and village community, and (v) to examine various suggestions and views on the drop-out and to suggest an operational strategy to counter the drop-out incidence among the Harijan children.

The study was conducted in eastern Uttar Pradesh. One block was selected in each district on the basis of concentration of Harijan population. Rasra block in Ballia and Ramput block in Azamgarh were selected. The selection of villages was done on the basis of total population of the village and the proportion of the Harijan population to the total village population. From the Seventeen villages selected from the two blocks, 300 drop-out cases were covered. The drop-out cases were the Harijan children who had dropped out from Classes I to VIII and their parents were the main respondents. Depending on the availability of the children and their maturity to respond, the children were interviewed for collecting additional information; 198 drop-outs were interviewed. The second group in the sample comprised sixty village leaders and forty school teachers. The tools used for collecting data, besides the interviews, were a schedule for Harijan parents of the drop-outs, a schedule for village leaders, a schedule for school teachers and a proforma for village schools.

The findings indicated: (i) The average size of the family was 6.5 with more males than females, the majority were nuclear families; nearly one-half of the total population was between 0-15 years and nearly 12 per cent were in the pre-school age. (ii) As many as 32 per cent families had no literate member; 72 per cent individuals were illiterate and a majority had only 3-4 years of schooling. (iii) Two-thirds of the population had land.

holdings which were of marginal size and inferior quality. One-third of the population was engaged in domestic duties or household activities, one-fourth in farm labour, one-tenth in skilled or unskilled jobs and the rest in trade, craft, etc. Only 5 per cent were engaged in the cultivation of their own land while 1.4 per cent were in white collar occupations. (iv) The monthly income of 78 per cent families was Rs 200 or less; as many as 90 per cent were in debt which varied from Rs 100 to Rs 5,000 per family. (v) There was a growing awareness among parents of the need for enrolling children in school; most children were enrolled in school at the age of six years while the teachers played a marginal role.

(vi) Parents and teachers felt that children did not face any emotional problems. Ninetyfour per cent of the children had no failures; 80 per cent attended school regularly and nearly one-fourth regularly attended to homework. (vii) The children were substantially benefited by school education, over two-thirds acquired proficiency in reading and writing, one-third in arithmetic, games and sports and several learnt arts and crafts. The children were docile and obedient, cooperative and painstaking; parents felt the children enjoyed extra-curricular activities. (viii) The school-going children helped the family members, substantially in common duties; a few of them were gainfully employed even while attending school. The main reasons for their dropping out were the economic hardship of the family, domestic exigencies like ill health in the family or of the child. (ix) In 70 per cent cases the decision to drop-out was taken by the family while in the remaining cases it was by the child, 45 per cent families seriously debated dropping out; over two thirds were very unwilling to terminate the child's schooling but were helpless. (x) Nearly 60 per cent totally abandoned what they had learnt at school, the drop-outs had low aspirational level; however, 30 per cent were willing to restart educational career if arrangements were made in the school; 10 per cent had sought readmission, without success. (xi) Only 53 per cent parents visited the school but almost two-thirds were aware of the school programmes and activities most parents had no direct information about the child's classroom behaviour, performance and the like. (xii) The behaviour of teachers and classmates was criticised by children; leaders also criticised the biased and discriminatory attitude of teachers. (xiii) The village-level institutions showed marginal attention towards the educational activities of the school; though a few village leaders did provide leadership and support, they were largely apathetic and unmotivated.

Group-II

Vol.III  
Abstract-342

A STUDY OF THE PROBLEMS OF INTRODUCING UNIVERSAL  
PRIMARY EDUCATION SYSTEM IN BANGLADESH

( Author- M.D. Husssin, Ph.D.,Edu.,Del.U.,1978)

The main objective of the study was to identify the different problem from various areas, namely, economic social, environmental, geographical, religious, administrative and political, for introducing universal primary education. The hypothesis framed was that the problems pertaining to different areas were perceived as equally important by family heads, dropout, head teachers, education officers and teacher educators.

The study was mainly descriptive in nature and the survey method was followed. The sample consisted 393 respondents belonging to different categories- heads of families having children of ages 5 to 15, years, primary school dropouts (age-level upto 15 years) primary school head teachers, thana education officers, sub-divisional education officers, district inspectors, of schools, district education officers, superintendents, of primary training institutions, and teacher educator of from teacher education institutions. Only two villages were succed for interviewing the family heads and the dropouts. For data collection two schedules (one for the heds of the families and another for the dropouts of primary schools) and two questionnaires (one for head teachers of primary schools and another for the thana education officers, sub-divisional education officers, district education officers, teacher educators) were developed. Statistical techniques like chi-square, were used in analysing the data.

The major findings were:-

(i) Economic, social, environmental, (home and school), geographical, religious, administrative, and political factors influenced the programme of universal provision, universal enrolment and universal retention.

(ii) Besides these, poverty of the state as well as poverty of the parents were the major factors which were creating hinderances in introducing universal primary education system in Bangladesh.

(iii) The problems considered to be very important were the financial difficulties of the Government, Parents, inability to afford expenses on clothes, books, writing activities, medical facilities, inadequate food for their children, inadequate accomodation in classroom, weak teacher-parent relationship, difficulties due to bad communication, inadequate inspection of school by thane education officers, inadequate inspecting personnel, and want of separate administrative structure for primary education.

(iv) The problems considered to be least important were, parents' feelings that education would spoil boys and they would not follow family occupation, parent's feelings that their children would not accept traditional culture if they got educated, girls' early marriage, and the system of heavy punishment at school.

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Group-II

Volume-III  
Abstract-402

A STUDY OF RELATIONSHIP BETWEEN SPATIAL  
EGOCENTRISM AND CONSERVATION OF LENGTH AND  
AREA IN DELHI SCHOOL CHILDREN

(Author - Amin, N., Ph.D.Edu., JMI, 1982)

The objectives of the study were to find out the relationship between (i) spatial egocentrism and conservation of length, (ii) spatial egocentrism and conservation of area, (iii) intelligence and conservation of length, (iv) intelligence and conservation of area, (v) Intelligence and spatial egocentrism, and (vi) conservation of length and conservation of area.

Thirty-seven schools out of seventy-five municipal corporation primary boys' schools of the south zone of Delhi were selected randomly. From each of the thirty-seven schools, about 50 per cent of the students between the age range 5 to 10 were selected. The sample thus comprised 307 children. The tools used in the study were Flavell's Task IC for measuring spatial egocentrism, Coloured Progressive Matrices, and two tools for assessing conservation of length and conservation of area developed by the researcher. The tools developed by the researcher had ten tasks each. These tasks were taken from Piaget's experiments. To analyse the data, product moment correlation contingency coefficients and test of linearity of regression were used.

The findings of the study were: (i) Perceptual role taking was highly and positively correlated with conservation of length and conservation of area (perceptual role-taking was considered inversely related with spatial egocentrism). (ii) Intelligence was moderately but positively correlated to conservation of length and conservation of area. (iii) There was negative but moderate correlation between intelligence and spatial egocentrism. (iv) Conservation of length and conservation of area were positively and highly related to each other.





Socio-psychological Factors in Creativity among  
School Children

(Author B. Mehdi, NCERT, 1977 (ICSSR-financed))

The study was designed to test the hypotheses

- (i) rural children will differ from urban children in respect of personality traits related to creativity.
- (ii) the personality patterns of high and low creatives will show marked differences with regard to their environment.
- (iii) the home background will have a more determining effect on creativity than variations in the type of schools attended.
- (iv) boys and girls will differ in respect of personality traits which are related to creativity either in type or in degree or both, even when environment is held constant.
- (v) the creatives possess high level of energy, are introvert, independent in thought and action and have a capacity to entertain opposing values and to tolerate apparent confusion or ambiguity in solving problems irrespective of the environment in which they are placed.

The sample consisted of 1054 boys and 337 girls from the states of Uttar Pradesh and Madhya Pradesh, studying in Classes VII and VIII. The tools used in the study were a battery of verbal (Hindi) and non-verbal tests of creativity constructed by the investigator, a quick scoring device for identifying creativity developed by the investigator, biographical inventory developed by the investigator, Standard Progressive Matrices and Thorndike's Dimensions of Temperament (adapted in Hindi).

The findings of the study were ;

- (i) the correlation between creativity and intelligence was significant but considerably low.

- (i) Correlation of self-evaluation inventory with intelligence, as measured by Standard Progressive Matrices, was  $-.012$  for boys and  $0.101$  for girls.
- (ii) Both boys and girls who were creative seemed to be sociable.
- (iv) Correlations of self-evaluation inventory with verbal and non-verbal creativity scores were relatively low.
- (v) In the rural boys sample, the correlations of biographical inventory with verbal and non-verbal tests of creativity were  $0.012$  and  $-0.118$ , respectively. For the urban girls the correlations obtained were  $.198$  and  $.133$ , respectively.

Group-II

Volume III  
Abstract 560

A STUDY OF CHILDREN'S PROBLEM SOLVING AND  
DECISION MAKING STRATEGIES

(Author M. Sexena, Ph.D. Psy., DeI.U., 1980)

The objective of the study was to investigate into the possible strategies adopted by children in a sample problem solving and decision making situation.

To study the strategies, the study was designed in the form of two experiments, problem solving and decision making situations, through a process analysis of the behaviour of children. The first experiment was conducted on 6-12 year old children from high and low socio-economic status groups represented by public and corporation schools, respectively. They were further sub-divided into 6-8, 8-10 and 10-12 year old children in both the socio-economic status groups. Thirty male children were included in each of the six groups. A problem series, consisting of six problems, each of which had similar basic elements, was devised. The second experiment the decision making experiment, was conducted on 10-12 year old children of the higher and the lower socio-economic status groups who had been included in the first experiment. The development of decision making strategies was investigated in a mixed motive situation as represented by the Prisoner's Dilemma Game.

The findings were :

- (i) While in a problem solving situation the dead ends were overcome by the creation of sub-goals related to the final goal states, the subjects in a decision making situation abandoned the goal itself.

- (ii) In a decision making situation, the interpersonal character of the situation where no strategy could be worked out without the cooperation of the partner, did not provide scope for the manifestation of total strategies or plans as made by the subjects.
- (iii) If the constraints of the interpersonal situation were made more relaxed, interspersed with no contingent gains and losses, the strategic manoeuvres were better understood.

CHILDREN JUDGEMENT OF PERSONAL HAPPINESS, IIM  
AHMEDABAD

(Author- R., Singh(NCERT FINANCED))

The major purpose of the research was to study how children of 4 to 9 years age expressed their immediate happiness. There were four experiments involving 72, 144, 48 subjects respectively.

Two experimental tasks were employed. Task I consisted of factorial combinations of verbal and concrete reinforcements. Children performed on a simple motor task and received one of the several combination of verbal reinforcements and a balloon. They gave self judgements of their happiness along a 15 face scale. In task 2, serial positions of positive and negative verbal reinforcements were manipulated. The subjects indicated their cumulative happiness from three verbal remarks. In accordance with the information integration theory, it was expected that the verbal and concrete reinforcements of Tasks-I and the verbal reinforcements of the different serial positions would be merged in expression of personal happiness.

The findings of the study were (i) Happiness followed an average rule (ii) Children's judgements were characterized by recency effect. (iii) Children between four and nine years of age had a well developed metric sense. (iv) Children of four to nine years of age were equally good in decentering to the multiple aspects of the reinforcing situations.



# A STUDY OF THE INFLUENCE OF CONTINUOUS EVALUATION ON LEARNING IN SCHOOL.,

( Author- S.K. Rao., Delhi. U., 1982)

Hypothesis of the study were that (i) there was no differences in performance of the students of control and experimental groups(ii) there was no differences in the performance of the students of control and public schools (iii) there was no difference in performance of boys and girls(iv) there was no difference in performance among the four different age groups(9 year/10 year/ 11 year/12years)(v) There was no difference in performance among the students who were first born, middle born and last born,(vi) there was no differences in performance of students of low and high educated fathers (vii) there was no difference in performance of students of low and high occupation fathers, (viii) there was no difference in performance of low and high-economic groups,(ix) there was no differences in performance between the students who belonged to two children families and more-than-two children families and (x) there was no difference in performance of the student who liked a particular subject and a particular subject teacher.

Sample for the study consisted of 800 students (boys and girls) in science and 641 students(boys and girls) in mathematics studying in standard V of public and central schools of south delhi, age ranging from 9 to 12 years. Thirteen teachers who were teaching science and mathematics to these students were also involved in the study. Out of four sections of standard V in each school, one section was kept as control group and the other sections as experimental groups. Data were collected in three stages. In the first stage data regarding I.Q. and creativity were obtained through the administration of Raven's progressive Matrices form A,B,C,D,E) and Torrance Tests of Creative Thinking(figural form A&B) to match the experimental and control groups. In the second stage nine science and nine mathematics objective based tests were administered. In each test

test after checking the answer sheets treatment was given to the experimental group students whereas no treatment was given to the control group, in the third stage, data regarding the likes and dislikes of students for science and mathematics subjects as well as the subject teacher and the family details were obtained by administering students' opinionnaire and family Inventory. The data were analysed with the help of t-test, f-test, central tendency and dispersion.

The major findings were (i) More than the feedback it was the continuous evaluation which seemed to have positive influence on learning under normal school situations. This finding was noted for all variables and for all subgroups under each variables and also all cognitive objects studied in this investigation. (ii) On all the tests except two, F-ratio showed significant difference at 0.01 level. (iii) Central School students seemed to get more influenced by continuous evaluation with feedback than the public school students, (iv) Learning in central schools, when continuous evaluation was done, seemed to get influenced better than that in public schools, otherwise public and central schools differed significantly in their achievement tests in all the nine tests. (v) No significant difference in the learning of boys and girls was noticed. (vi) As the level of hierarchy of objectives was increased. The mean performance decreased in both science and mathematics, and also, this was true for all the tests, (vii) Learning of mathematics was less influenced by different variables whereas learning of Science was influenced by some of the variables such as school, father's income, education and number of children. (viii) Although no significant differences were found where feedback was used, a trend in the direction of better performance in science was noted for those who received feedback treatment after each test, whereas in mathematics feedback had no influence on learning outcome.



Group-II

Volume-III

Abstract-894

AN INVESTIGATION INTO THE BASIC ASSAMESE  
VOCABULARY

(Author-N. Sarma, Ph. D. Edu., Gau. U., 1978)

The main objectives were

- (i) to take an account of the basic comprehension vocabulary by finding out the percentage of children who knew the meaning of the words;
- (ii) to prepare a glossary of words with their difficulty values in respect of the students of class VI (usually II\*) of the secondary schools of Assam
- (iii) to enable the textbook writers to produce extra reading materials for children on scientific lines,
- (iv) to enable the textbook writers to prepare graded textbooks for bright, average and below average children, and
- (v) to enable teachers, examiners, radio speakers, etc., to use such words in their dialogues, speeches, questions, explanations, etc., as are easily understood by a good percent of children.

The study was carried out in two phases, pilot and final. The syllabi for classes IV and V was studied and 1327 words selected for the pilot study. Six checklists were prepared and tried out on 300 students of class VI, selected from four secondary schools of greater Gauhati. Out of the 1327 words, 490 words were known to more than seventy percent of the students. In the final phase the content words were collected from a large number of sources. Finally, 1986 words including 837 known by less than seventy percent children, were selected and distributed into eight checklists. In all 1800 students (1112 boys and

688 girls) were selected from the secondary schools of seven districts of Assam by stratified random sampling technique. The scripts of 1620 students (1000 boys and 620 girls) were finally analysed. The difficulty value of each word was found out. The proportion, corrected proportion and confidence intervals for each word were estimated and converted into percentages. In all two glossaries was prepared. In glossary I the words taken from the textbooks of classes IV and V, known by over seventy percent children of class VI were arranged in alphabetical order. In glossary II the words which were taken from the textbooks, etc. of class VI, and textbooks of classes IV and V but known by less than seventy percent of the children of class VI were included in alphabetic order. Difficulty value and proportion value of each word was also indicated in the glossary.

The major findings were :

- (i) The gross estimated vocabulary in Assamese for the students of class VI studying in the secondary schools of Assam was 1986; after deducting the clusters the net estimate of words was 1589.
- (ii) Only 204 words from amongst the 1986 estimated vocabulary were known to more than sixty percent of the class VI students.
- (iii) The gap between the estimated vocabulary and the actual vocabulary was 1385.

Group-III

Volume-III  
Abstract-856

A COMPARATIVE STUDY OF EFFICACY OF THE DIRECT METHOD AND THE BILINGUAL METHOD OF TEACHING ENGLISH TO LOWER CLASSES OF SECONDARY SCHOOLS IN RURAL AREA OF MAHARASHTRA STATES.

(Author-M.A. GAIKWAD, Ph.D. Edu., Shi. U., 1982.)

Objectives of the study were

- (i) to examine the comparative efficacy of direct method and bilingual method under experimental condition for teaching English as a second language to lower classes of secondary schools in rural area
- (ii) to compare the achievement of pupils in language learning gained by direct method and bilingual method in respect of four basic skills of language learning, namely, listening, reading, writing and speaking and in case of structure and vocabulary comprehension
- (iii) to observe the efficiency of the methods in respect of suitability of the methods to the teacher in realistic rural conditions and in terms of time, energy required for preparation and presentation of teaching material employed by the teacher and
- (iv) to observe the efficiency of the methods in respect of suitability of the methods to the learners in terms of their difficulties in comprehension, active contacts with the foreign language and promoting them for active participation and hence developing a good classroom climate

Class V from a village school which was typically rural in all respects was selected. The parallel groups experimental design was followed. Each group - the experimental and the control - contained fortythree pupils (twentytwo boys and twentyone girls). The groups were equated on the basis of equal number of pupils, sex, chronological age, I.Q., general scholarship, socio-economic status of parents, etc. The experiment was conducted for one academic year. The investigator

himself taught both the groups allotting equal number of teaching periods. The same matter, viz., the same textbook was presented to both the groups. Tests given were mainly teacher made tests. The statistics used were mean, standard deviation, critical ratio and analysis of variance. Rank difference method was used to find out the correlation between I.Q. and marks of each skill test.

The major findings were :

- (i) Bilingual method was superior to direct method in developing linguistic skills of understanding, speaking and writing.
- (ii) Bilingual method was also superior to direct method so far as developing the language elements of structure and vocabulary in the pupils.
- (iii) Both the methods were equally effective so far as reading skills were concerned.
- (iv) From the view point of suitability of the method to teacher as well as to the learner, the bilingual method was more suitable than the direct method.
- (v) Bilingual method enabled the teacher and the pupils to speed up intercommunication among themselves.

